United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Alabama Agricultural Experiment Station and Alabama Soil and Water Conservation Committee

Soil Survey of Tallapoosa County, Alabama

How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

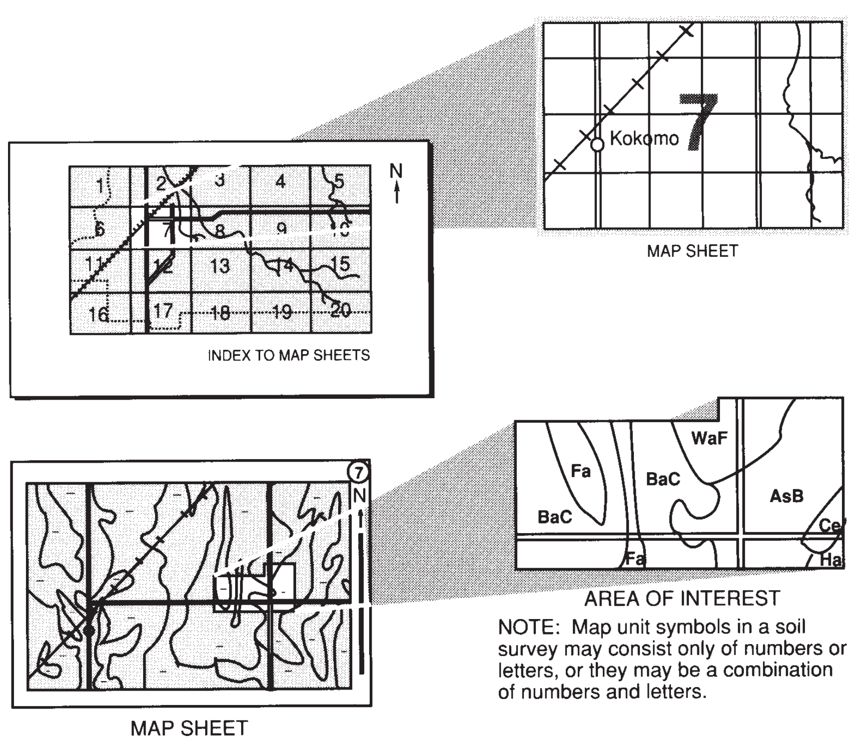
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service, the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, and the Alabama Department of Agriculture and Industries. The survey is part of the technical assistance furnished to the Tallapoosa County Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 2003. Soil names and descriptions were approved in 2004. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2000. The most current official data are available on the Internet.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Nondiscrimination Statement

Cover Caption

Martin Lake, which is located in the central part of Tallapoosa County and provides excellent opportunities for boating, fishing, and other water sports. The soils along the lake provide good habitat for many species of wildlife and are productive as woodland.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Issued 2007

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Gary Kobylski

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State Conservationist
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Soil Survey of Tallapoosa County, Alabama

By Lawrence E. McGhee, Natural Resources Conservation Service

Fieldwork by Lawrence E. McGhee, John Burns, Christopher Z. Ford, Ronald J. Koptis, and Johnny C. Trayvick, Natural Resources Conservation Service, and Alfred Jackson and Charles F. Montgomery, Private Soil Consultants

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, and the Alabama Department of Agriculture and Industries

TALLAPOOSA COUNTY is in the east-central part of Alabama (fig. 1). It is bordered on the north by Clay and Randolph Counties, on the east by Chambers County, on the west by Coosa County, and on the south by Elmore, Macon, and Lee Counties. Dadeville, the county seat, is near the center of the county. It is about 50 miles northeast of Montgomery. The total area of the county is 490,160 acres, or about 766 square miles. It has a maximum length of 37 miles north to south and a maximum width of 24 miles east to west. About 461,340 acres consists of land areas and small areas of water. Large bodies of water, primarily Martin Lake and the Tallapoosa River, make up about 28,820 acres of the total acreage in the county.

Tallapoosa County is mostly rural. In 2000, it had a population of approximately 41,475 (ADECA, 2000). The main communities in Tallapoosa County are Alexander City, Camp Hill, Dadeville, Daviston, East Tallassee, Jackson Gap, New Site, and Reeltown.

Most of the acreage in the county is used as woodland, though a significant amount of land in the county is used for pasture and hayland.

The majority of Tallapoosa County is located in the Southern Piedmont Plateau region, and the southern five percent of the county is located in the Southern Coastal Plain region. The county is immediately south of the Appalachian Plateau. The elevation ranges from about 200 feet above sea level in the southern part of the county to about 1,090 feet above sea level in the northern part of the county.

Farming is very important to the county. The climate favors cash-grain and livestock farming. The major crops are corn, cotton, and wheat. The major kind of livestock is beef cattle.

This soil survey updates the survey of Tallapoosa County published in 1910 (Smith and Avary, 1910). It provides additional information and larger maps, which show the soils in greater detail.

General Nature of the Survey Area

This section provides general information about the survey area. It describes the history and development, economic development, recreation, transportation, water resources, mineral resources, and climate.

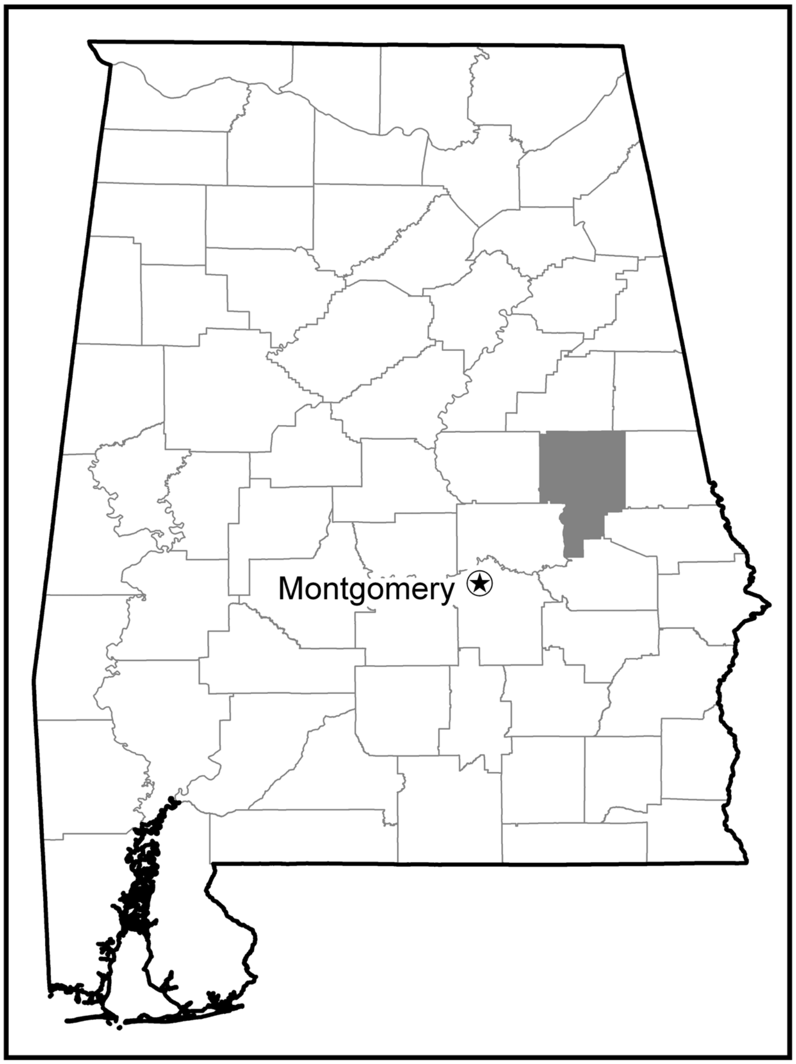

Figure 1.—Location of Tallapoosa County in Alabama.

History and Development

Tallapoosa County was created by the Alabama Legislature on December 18, 1832. The county is named for the Tallapoosa River. Tallapoosa is believed to be derived from a word in the Choctaw Indian language that means “pulverized rock” (ADAH, 2006).

The final battle of the Creek War of 1813-1814, which was part of the War of 1812, took place in Tallapoosa County. The historic Horseshoe Bend National Military Park (fig. 2) preserves the site of this famous battle.

Tallapoosa County also had an authentic gold rush in the early 1840s. Gold mining operations were carried on in Tallapoosa County from 1842 to 1936.

Economic Development

Agriculture has always been an important economic enterprise in Tallapoosa County. About 78,232 acres of land area is farmed (ADAI, 2002). The major

agricultural products are corn, cotton, wheat, hay, and cattle. Loblolly pine is the major tree produced for timber.

Other important economic enterprises in Tallapoosa County include the internationally known Russell Corporation, which is a branded apparel company that specializes in active wear, casual wear, and athletic uniforms; Avondale Mills; and the Central Alabama Community College, which provides employment as well as educational opportunities to the surrounding area.

Recreation

Scenic areas in Tallapoosa County include Martin Lake and the Wind Creek Park. Martin Lake is in the heart of the growing trade triangle formed by Montgomery, Birmingham, and Atlanta. Wind Creek Park is along the shores of Martin Lake. The park has 642 campsites and is the largest state-operated campground in the United States. Campers and other visitors to the lake can enjoy fishing, hiking, swimming, and many other recreational activities.

Transportation

The major highway that provides access through Tallapoosa County is Federal Highway 280, which runs east and west through Alexander City, Alabama. Other highways include Highway 49, which runs north and south through Goldville and Dadeville; Highway 50, which runs east and west through Walnut Hill; Highway 63, which runs through Hackneyville and Alexander City; Highway 22, which runs through New Site and Daviston; and Highway 14, which runs through Tallassee.

Tallapoosa County is provided railroad service by Norfolk Southern, bus service by Greyhound and Trailways, and air service at T. C. Russell Field.

Figure 2.—Historic Horseshoe Bend National Military Park, located south of New Site. The park is the site of the Battle of Horseshoe Bend.

Water Resources

Tallapoosa County has an adequate, although limited, amount of surface water suitable for domestic and recreational uses. The major creeks in the county are Blue, Elkahatchee, Hillabee, Sandy, Sougahatchee, and Wind Creeks. These six creeks feed into the Tallapoosa River. Numerous lakes and ponds provide water for livestock, generation of power, and recreation.

Mineral Resources

Economically important minerals in Tallapoosa County include clay, sand, and gravel. Clay is abundant throughout most of the county. It can be used in blends for ceramic products, as absorbent for grease, or as a carrier for fertilizers. Terrace and alluvial deposits of sand and gravel are in the southern part of the county and in areas around the Tallapoosa River and other major streams.

Climate

Prepared by the Natural Resources Conservation Service, National Water and Climate Center, Portland, Oregon.

Climate tables are created from the climate station in Milstead, Alabama, in nearby Elmore County. There are no long-term climate stations in Tallapoosa County.

Thunderstorm days, relative humidity, percent sunshine, and wind information are estimated from the First Order station in Montgomery, Alabama.

Climate data are provided in the tables "Temperature and Precipitation," "Freeze Dates in Spring and Fall," and "Growing Season." The data were recorded at Milstead, Alabama, in the period 1971 to 2000 (temperature readings in 22 out of these 30 years).

In winter, the average temperature is 47.6 degrees F and the average daily minimum temperature is 36.0 degrees. The lowest temperature on record, which occurred in Milstead on January 21, 1985, is -3 degrees. In summer, the average temperature is 79.7 degrees and the average daily maximum temperature is 90.8 degrees. The highest recorded temperature, which occurred on July 30, 1986, is 106 degrees.

Growing degree days are shown in the table "Temperature and Precipitation." They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 52.48 inches. Of this, 33.2 inches, or 63 percent, usually falls in March through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall on record was 10.98 inches at Milstead on August 31, 1961. Thunderstorms occur on about 60 days each year and occur in all months, but they occur most frequently in June through August.

The average seasonal snowfall is about 0.4 inches. The greatest snow depth at any one time during the period of record was 6 inches at Milstead on March 13, 1993. On average, less than 1 day per year has at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 55 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The sun shines 63 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south in most months, except in September through January when it is from

the northeast or north. Average windspeed is highest, around 8.5 miles per hour, in March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop

yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Survey Procedures

The general procedures followed in making this survey are described in the "National Soil Survey Handbook" (USDA, 2002) of the Natural Resources Conservation Service. The "Soil Survey of Tallapoosa County," published in 1910 (Smith and Avary, 1910), and the "Geology of Tallapoosa County, Alabama" (Neatherly and Bentley, 1971) were among the references used.

Before the fieldwork began, preliminary boundaries of landforms were plotted stereoscopically on high altitude aerial photographs. U.S. Geological Survey topographic maps and aerial photographs were studied to relate land and image features.

Traverses were made on foot and by vehicle at variable intervals, depending on the complexity of the soil landscape and geology. Soil examinations along each traverse were made at intervals of 50, 100, or 300 feet, depending on the landscape and soil pattern (Johnson, 1961; Steers and Hajek, 1979). Observations of landforms, uprooted trees, vegetation, roadbanks, and animal burrows were made continuously without regard to spacing. Soil boundaries were determined on the basis of soil examinations, observations, and photo interpretation. The soil material was examined with the aid of a spade, a hand auger, or a truck-mounted probe to a depth of 5 feet or more. The pedons described as typical were observed and studied in excavations.

Samples for chemical and physical analyses and for engineering test data were taken from the site of the typical pedons of some of the major soils in the survey area. The analyses were made by the Agronomy and Soil Clay Mineralogy Laboratory, Auburn University, Auburn, Alabama; the National Soil Survey Laboratory, Lincoln, Nebraska; and the Alabama Department of Highways and Transportation, Montgomery, Alabama. The results of some of the analyses are published in this soil survey report. Unpublished analyses and the laboratory procedures can be obtained from the laboratories.

High-altitude aerial photography base maps at a scale of 1:24,000 were used for mapping of soils and surface drainage in the field. Cultural features were transferred from U.S. Geological Survey 7.5-minute series topographic maps and were recorded from visual observations. Soil mapping, drainage patterns, and cultural features recorded on base maps were transferred to half-tone film positives by soil scientists. The film positives were then transferred to 1:24,000 base maps developed from digital orthophotography prior to the final map-finishing process.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Each map unit is rated for cultivated crops, pasture and hayland, woodland, and urban uses. Cultivated crops are those typically grown in the survey area. Pasture and hayland refer to improved locally grown grasses and legumes. Woodland refers to areas of native or introduced trees. Urban uses include residential, commercial, and industrial developments.

The boundaries of the general soil map units in Tallapoosa County were matched, where possible, with those of the previously completed surveys of Chambers, Clay, Elmore, Lee, Macon, and Randolph Counties. In some areas, however, the lines do not join and the names of the map units differ. These differences are mainly the result of changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey area boundaries.

1. Pacolet-Rion-Cecil

Dominantly nearly level to steep, well drained soils that have a loamy surface layer and a loamy or clayey subsoil; on Piedmont uplands

Setting

Location in the survey area: Northwestern part
Landscape: Piedmont
Landform: Uplands
Landform position: Pacolet—convex part of ridges and side slopes; Cecil—ridgetops and gently sloping side slopes
Slope: 2 to 25 percent

Composition

Percent of the survey area: 12
- Pacolet soils: 55 percent
- Rion soils: 25 percent
- Cecil soils: 10 percent

Minor soils: 10 percent, including Chewacla, Hard Labor, Louisburg, Wedowee and, Wehadkee soils

Soil Characteristics

Pacolet
Surface layer: Dark yellowish brown gravelly sandy loam
Subsoil: Upper part—red clay; lower part—red clay and clay loam
Substratum: Variegated sandy loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 25 percent
Parent material: Felsic igneous and metamorphic rock

Rion
Surface layer: Brown sandy loam
Subsurface layer: Light yellowish brown sandy loam
Subsoil: Upper part—strong brown loam and sandy clay loam; lower part—loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 6 to 35 percent
Parent material: Granite gneiss and schist

Cecil
Surface layer: Brown sandy loam
Subsurface layer: Red sandy clay loam
Subsoil: Upper part—red clay; next part—red clay that has strong brown mottles; lower part—red clay loam that has strong brown mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 10 percent
Parent material: Felsic igneous and metamorphic rock

Minor soils
- The moderately well drained Hard Labor soils on the lower slopes and on toeslopes
- The somewhat poorly drained Cartecay and Chewacla soils and the poorly drained Wehadkee soils on flood plains
- The Louisburg and Wedowee soils on side slopes

Use and Management

Major uses: Woodland, wildlife habitat, and pasture

Cropland
Management concerns: Erodibility, restricted use of equipment, and low fertility

Pasture and hayland
Management concerns: Erodibility, restricted use of equipment, and low fertility

Woodland
Management concerns: Competition from undesirable plants, erodibility, restricted use of equipment, and seedling survival

Urban development
Management concerns: Restricted permeability, low strength, and steepness of slope

2. Madison-Louisa

Dominantly gently sloping to very steep, well drained soils that have a loamy surface layer, a clayey or loamy subsoil, and soft bedrock at a depth of 10 to more than 60 inches; on Piedmont uplands

Setting

Location in the survey area: North-central part
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Madison—summits and side slopes; Louisa—steep to very steep side slopes
Slope: 2 to 50 percent

Composition

Percent of the survey area: 22
Madison soils: 65 percent
Louisa soils: 20 percent
Minor soils: 15 percent, including Altavista, Cartecay, Chewacla, Mountain Park, and Wehadkee soils

Soil Characteristics

Madison
Surface layer: Dark brown fine sandy loam
Subsurface layer: Yellowish red sandy clay loam
Subsoil: Upper part—red clay; lower part—red sandy clay loam
Substratum: Upper part—variegated loam saprolite weathered from mica schist that has pockets of subsoil material; lower part—variegated loam saprolite weathered from mica schist in shades of brown and yellow
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 30 percent
Parent material: Residuum from highly weathered mica schist or rocks that have a high mica content

Louisa
Surface layer: Brown sandy clay loam
Subsoil: Upper part—strong brown loam; lower part—yellowish red sandy clay loam
Bedrock layer: Dark yellowish brown, highly weathered, soft mica schist
Depth class: Shallow
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 15 to 50 percent
Parent material: Highly weathered mica schist

Minor soils
- The moderately well drained Altavista soils on low stream terraces
- The somewhat poorly drained Cartecay and Chewacla soils and the well drained Toccoa soils on flood plains
- The well drained, moderately deep Mountain Park soils on very steep slopes and escarpments

Use and Management

Major uses: Woodland, wildlife habitat, and pasture

Cropland
Management concerns: Erodibility and restricted use of equipment

Pasture and hayland
Management concerns: Erodibility, restricted use of equipment, and low fertility

Woodland
Management concerns: Madison—erodibility, restricted use of equipment, and competition from undesirable plants; Louisa—erodibility, restricted use of equipment, seedling survival, and depth to bedrock

Urban development
Management concerns: Madison—slope, low strength, and restricted permeability; Louisa—slope and depth to bedrock

3. Pacolet-Rion-Wedowee

Dominantly gently sloping to steep, well drained soils that have a loamy surface layer and a loamy or clayey subsoil; on Piedmont uplands

Setting

Location in the survey area: Western-central part
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 35 percent

Composition

Percent of the survey area: 7
Pacolet soils: 50 percent
Rion soils: 20 percent
Wedowee soils: 20 percent
Minor soils: 10 percent, including Cartecay, Hard Labor, Louisburg, Saw, and Wehadkee soils

Soil Characteristics

Pacolet
Surface layer: Brown gravelly sandy loam
Subsoil: Upper part—red clay; lower part—red clay loam
Substratum: Variegated sandy loam saprolite in shades of red, brown, and yellow
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 3 to 25 percent
Parent material: Felsic igneous and metamorphic rock

Rion
Surface layer: Brown sandy loam
Subsurface layer: Light yellowish brown sandy loam
Subsoil: Upper part—strong brown loam and sandy clay loam; lower part—loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 6 to 35 percent
Parent material: Felsic igneous and metamorphic rock

Wedowee
Surface layer: Brown sandy loam
Subsurface layer: Light yellowish brown sandy loam
Subsoil: Upper part—yellowish brown sandy clay; lower part—yellowish brown clay that has red and strong brown mottles
Substratum: Variegated sandy clay loam saprolite in shades of red, brown, and yellow
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 35 percent
Parent material: Granite gneiss and schist

Minor soils
- The moderately well drained Hard Labor soils on toeslopes
- The somewhat poorly drained Cartecay soils and the poorly drained Wehadkee soils on narrow flood plains
- The Louisburg soils on side slopes
- The moderately deep Saw soils on convex summits

Use and Management

Major uses: Woodland, woodland wildlife habitat, and pasture

Cropland
Management concerns: Erodibility and low fertility

Pasture and hayland
Management concerns: Erodibility, equipment use, and low fertility

Woodland
Management concerns: Competition from undesirable plants

Urban development
Management concerns: Restricted permeability, low strength, and slope

4. Tallapoosa-Fruithurst-Badin

Dominantly gently sloping to very steep, well drained soils that have a loamy surface layer, a loamy or clayey subsoil, and are shallow and moderately deep to soft bedrock; on Piedmont uplands

Setting

Location in the survey area: Narrow bands in the northwest, west, and central parts
Landscape: Piedmont
Landform: Uplands
Landform position: Tallapoosa—upper and middle side slopes; Fruithurst—lower side slopes and toeslopes; Badin—ridgetops and side slopes
Slope: 2 to 40 percent

Composition

Percent of the survey area: 11
Tallapoosa soils: 50 percent
Fruithurst soils: 25 percent
Badin soils: 15 percent
Minor soils: 10 percent, including Cartecay, Tatum, and Toccoa soils

Soil Characteristics

Tallapoosa
Surface layer: Reddish brown gravelly loam
Subsurface layer: Yellowish red gravelly loam
Subsoil: Upper part—yellowish red clay loam; lower part—red clay loam
Bedrock layer: Weathered phyllite
Depth class: Shallow
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 40 percent
Parent material: Highly weathered sericite schist and phyllite

Fruithurst
Surface layer: Dark yellowish brown gravelly loam
Subsoil: Upper part—reddish yellow loam; next part—yellowish red clay loam; lower part—yellowish red loam
Bedrock layer: Sericite schist or phyllite
Depth class: Moderately deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 3 to 40 percent
Parent material: Highly weathered sericite schist and phyllite

Badin
Surface layer: Dark reddish brown gravelly loam
Subsoil: Upper part—red clay; next part—red clay; lower part—red clay loam
Bedrock layer: Strong brown sericite schist
Depth class: Deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 15 percent
Parent material: Sericite schist and phyllite

Minor soils
- The somewhat poorly drained, loamy Cartecay and Chewacla soils on flood plains
- The clayey Tatum soils on ridgetops
- The loamy Toccoa soils on natural levees of flood plains

Use and Management

Major uses: Woodland, pasture, and wildlife habitat

Cropland
Management concerns: Tallapoosa—erodibility, depth to bedrock, and low fertility; Fruithurst—erodibility and low fertility; Badin—erodibility and low fertility

Pasture and hayland
Management concerns: Tallapoosa—erodibility, depth to bedrock, and low fertility; Fruithurst—erodibility and low fertility; Badin—erosion and low fertility

Woodland
Management concerns: Tallapoosa—erodibility, restricted use of equipment, seedling survival, and windthrow hazard; Fruithurst—erodibility and restricted use of equipment; Badin—competition from undesirable plants

Urban development
Management concerns: Tallapoosa and Fruithurst—depth to bedrock and slope; Badin—restricted permeability, low strength, and depth to bedrock

5. Gwinnett-Lloyd-Agricola

Dominantly gently sloping to strongly sloping, well drained, dark red soils that have a loamy surface layer and a clayey subsoil; on Piedmont uplands

Setting

Location in the survey area: Central part
Landscape: Piedmont
Landform: Uplands
Landform position: Gently sloping to moderately sloping ridgetops and moderately sloping to steep side slopes
Slope: 2 to 25 percent

Composition

Percent of the survey area: 26
Gwinnett soils: 40 percent
Lloyd soils: 30 percent
Agricola soils: 15 percent
Minor soils: 15 percent, including Cartecay, Chewacla, Enon, Hiwassee, Mecklenburg, Toccoa, Wilkes, Winnsboro, and Wynott soils

Soil Characteristics

Gwinnett
Surface layer: Dark reddish brown gravelly sandy loam
Subsoil: Dark red clay
Substratum: Dark red sandy clay loam
Bedrock layer: Soft, dark-colored rock that is high in iron and magnesium
Depth class: Deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 6 to 25 percent
Parent material: Residuum weathered from basic crystalline rock

Lloyd
Surface layer: Dark reddish brown loam
Subsoil: Upper part—dark red clay; lower part—dark red and red silty clay loam
Substratum: Strong brown silt loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 15 percent
Parent material: Residuum weathered from dark-colored basic and intermediate rock

Agricola
Surface layer: Dark reddish brown gravelly loam
Subsurface layer: Reddish brown gravelly loam
Subsoil: Upper part—dark red clay loam; next part—dark red clay; lower part—red clay loam
Bedrock layer: Soft, tilted, fractured basic crystalline rock
Depth class: Moderately deep
Drainage class: Well drained
Depth to high water table: More than 6.0 feet
Slope: 15 to 25 percent
Parent material: Residuum weathered from basic crystalline rock

Minor soils

- The well drained Enon and Mecklenburg soils at the lower elevations
- The well drained Hiwassee soils on terraces
- The Winnsboro, Wynott, and Wilkes soils that are deep to shallow to bedrock, formed from mafic rocks, and are on the lower slopes

Use and Management

Major uses: Woodland, pasture, hayland, and wildlife habitat

Cropland
Management concerns: Erodibility, low fertility, and slope

Pasture and hayland
Management concerns: Erodibility, restricted use of equipment, and low fertility

Woodland
Management concerns: Restricted use of equipment and competition from undesirable plants

Urban development
Management concerns: Gwinnett and Agricola—restricted permeability, low strength, depth to bedrock, and slope; Lloyd—restricted permeability, low strength, and slope

6. Pacolet-Rion-Gwinnett

Dominantly gently sloping to steep, well drained soils that have a loamy surface layer and a clayey or loamy subsoil; on Piedmont uplands

Setting

Location in the survey area: Southern and southeastern parts
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 35 percent

Composition

Percent of the survey area: 16
Pacolet soils: 45 percent
Rion soils: 30 percent
Gwinnett soils: 15 percent
Minor soils: 10 percent, including Chewacla, Cecil, Hard Labor, Louisburg, Mecklenburg, Wedowee, and Wehadkee soils

Soil Characteristics

Pacolet
Surface layer: Dark yellowish brown gravelly sandy loam
Subsoil: Upper part—red clay; lower part—red clay and clay loam
Substratum: Variegated sandy loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to high water table: More than 6.0 feet
Slope: 2 to 25 percent
Parent material: Felsic igneous and metamorphic rock

Rion
Surface layer: Brown sandy loam
Subsurface layer: Light yellowish brown sandy loam
Subsoil: Upper part—yellowish red clay loam; lower part—strong brown sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 6 to 35 percent
Parent material: Felsic igneous and metamorphic rock

Gwinnett
Surface layer: Dark reddish brown gravelly sandy loam
Subsoil: Dark red clay
Substratum: Dark red sandy clay loam
Bedrock layer: Soft, dark-colored rock that is high in iron and magnesium
Depth class: Deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 6 to 25 percent
Parent material: Residuum weathered from basic crystalline rock

Minor soils
- The somewhat poorly drained Chewacla soils and the poorly drained Wehadkee soils on flood plains
- The moderately well drained Hard Labor soils on footslopes and toeslopes
- The Cecil and Mecklenburg soils in the lower positions
- The Louisburg soils on the steeper slopes

Use and Management

Major uses: Woodland and pasture

Cropland
Management concerns: Erodibility and low fertility

Pasture and hayland
Management concerns: Erodibility, equipment use, and soil fertility

Woodland
Management concerns: Competition from undesirable plants

Urban development
Management concerns: Restricted permeability, low strength, and slope

7. Cowarts-Marvyn-Uchee

Dominantly nearly level to steep, well drained soils that have a loamy or sandy surface layer and a loamy subsoil; on uplands and high stream terraces of the Coastal Plain

Setting

Location in the survey area: Southern part
Landscape: Coastal Plain
Landform: Uplands and terraces
Landform position: Cowarts—narrow ridgetops and sloping side slopes; Marvyn—nearly level, slightly convex slopes; Uchee—strongly sloping side slopes
Slope: 0 to 25 percent

Composition

Percent of the survey area: 6
Cowarts soils: 50 percent
Marvyn soils: 25 percent
Uchee soils: 15 percent
Minor soils: 10 percent, including Greenville, Iuka, Kinston, and Springhill soils

Soil Characteristics

Cowarts
Surface layer: Brown gravelly sandy loam
Subsurface layer: Yellowish brown sandy loam
Subsoil: Upper part—yellowish brown sandy clay loam; lower part—yellowish brown sandy clay loam that has strong brown and red masses of oxidized iron and pale brown iron depletions
Substratum: Upper part—mottled yellowish brown, light gray, and red sandy clay loam that has thin strata and pockets of red sandy loam; lower part—mottled dusky red, strong brown, and white clay
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 2 to 25 percent
Parent material: Unconsolidated marine sediments

Marvyn
Surface layer: Brown loamy sand
Subsoil: Upper part—yellowish brown sandy clay loam; next part—strong brown sandy clay loam; lower part—yellowish brown sandy clay loam
Substratum: Mottled reddish yellow, yellowish brown, and pale yellow clay that has strata and pockets of coarser material
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope: 0 to 5 percent
Parent material: Unconsolidated marine sediments

Uchee
Surface layer: Brown loamy sand
Subsurface layer: Upper part—yellowish brown loamy sand; lower part—yellowish brown sandy loam
Subsoil: Strong brown sandy clay loam
Substratum: Upper part—mottled yellowish red, strong brown, brownish yellow, and light gray stratified sandy clay, sandy clay loam, and sandy loam; lower part—mottled brownish yellow, light gray, and red stratified sandy clay, sandy clay loam, and sandy loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 3.5 to 5.0 feet from January through April
Slope: 15 to 25 percent
Parent material: Loamy and sandy marine sediments

Minor soils
- The well drained, clayey Greenville soils on high terraces adjacent to the Tallapoosa River

- The poorly drained Kinston soils and the moderately well drained Iuka soils on flood plains
- The well drained Springhill soils on gently sloping to strongly sloping side slopes

Use and Management

Major uses: Pasture, hayland, woodland, and wildlife habitat

Cropland
Management concerns: Erodibility and low fertility

Pasture and hayland
Management concerns: Erodibility and low fertility

Woodland
Management concerns: Competition from undesirable plants

Urban development
Management concerns: Cowarts—restricted permeability and slope; Marvyn—none; Uchee—slope, droughtiness, and wetness

8. Eunola-Toccoa

Dominantly moderately well drained and well drained soils that have a loamy sand surface layer and a loamy subsoil; on low terraces and flood plains

Setting

Location in the survey area: Extreme southwestern part of the county, adjacent to the Tallapoosa River
Landscape: Coastal Plain
Landform: Eunola—steam terraces; Toccoa—flood plains
Landform position: Eunola—slightly convex slopes; Toccoa—high, convex and slightly concave slopes on flood plains
Slope: 0 to 2 percent

Composition

Percent of the survey area: Less than 1 percent
Eunola soils: 50 percent
Toccoa soils: 35 percent
Minor soils: 15 percent, including Buncombe, Iuka, Kinston, and Wickham soils

Soil Characteristics

Eunola
Surface layer: Dark grayish brown sandy loam
Subsoil: Upper part—yellowish brown sandy clay loam; lower part—yellowish brown sandy clay loam that has olive yellow, red, and light grayish brown masses of oxidized iron and iron depletions
Substratum: Upper part—mottled strong brown, brownish yellow, and red stratified sandy loam, sandy clay loam, and clay; lower part—red stratified sandy loam, sandy clay loam, and clay that has strong brown and yellowish brown masses of oxidized iron and light grayish brown iron depletions
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Slope: 0 to 2 percent
Parent material: Loamy and sandy marine sediments

Toccoa

Surface layer: Dark brown sandy loam
Substratum: Upper part—strong brown and dark yellowish brown stratified sandy loam and loamy sand; lower part—light yellowish brown sandy loam that has yellowish brown masses of oxidized iron
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 2.5 to 5.0 feet from January through December
Slope: 0 to 2 percent
Parent material: Loamy and sandy alluvium

Minor soils

- The sandy, excessively drained Buncombe soils on convex natural levees
- The well drained Wickham soils on low terraces

Use and Management

Major uses: Hayland, pasture, cultivated crops, woodland, and wildlife habitat

Cropland

Management concerns: Eunola—wetness; Toccoa—flooding

Pasture and hayland

Management concerns: Eunola—wetness; Toccoa—flooding

Woodland

Management concerns: Restricted use of equipment and competition from undesirable plants

Urban development

Management concerns: Flooding and wetness

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect land use. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar land use requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown

on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Cecil sandy loam, 2 to 6 percent slopes, moderately eroded, is a phase of the Cecil series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Madison-Louisa complex, 15 to 30 percent slopes, moderately eroded, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for land use. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, borrow, is an example.

The table “Acreage and Proportionate Extent of the Soils” lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

AlA—Altavista silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Piedmont uplands
Landform: Stream terraces
Landform position: Slightly convex slopes
Shape of areas: Narrow and oblong
Size of areas: 5 to 20 acres

Composition

Altavista and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 7 inches—brown silt loam

Subsoil:
7 to 11 inches—yellowish brown sandy clay loam
11 to 27 inches—olive yellow sandy clay loam
27 to 40 inches—olive yellow clay loam that has yellowish brown, brownish yellow, and light brownish gray mottles
40 to 52 inches—olive yellow sandy clay loam that has light gray mottles

Substratum:
52 to 80 inches—light gray sandy loam and sandy clay loam that has olive yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1.5 to 2.5 feet from January through March
Shrink-swell potential: Low
Flooding: Rare
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Wickham soils, which are well drained and are in the higher positions
- Soils that are somewhat poorly drained and are in the slightly lower positions

Similar soils:
- Altavista soils that have a sandy loam or loamy sand surface texture

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.
- Avoiding tillage when the soil is wet reduces clodding and crusting.
- Installing and maintaining an artificial drainage system reduce the wetness limitations and improve the productivity of the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and helps to maximize productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.
- Areas within this map unit may need artificial drainage to maximize productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine

Management concerns: Competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Placing structures on the highest parts of the landscape reduces the risk of damage from flooding.
- Constructing dwellings on raised, well compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets
Suitability: Suited
Management concerns: Flooding, low strength, and wetness
Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Areas within this map unit may need a surface or subsurface drainage system.

Interpretive Groups

Land capability subclass: 2w
Prime farmland status: Yes
Hydric soil status: No

AtB—Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded

Setting

Landscape: Piedmont uplands
Landform: Stream terraces
Landform position: Slightly convex slopes
Shape of areas: Long and narrow
Size of areas: 10 to 50 acres

Composition

Altavista and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 7 inches—yellowish brown fine sandy loam

Subsoil:
7 to 11 inches—yellowish brown sandy clay loam
11 to 27 inches—olive yellow clay loam that has yellowish brown and light yellowish brown mottles
27 to 40 inches—olive yellow clay loam that has yellowish brown, brownish yellow, and light brownish gray mottles
40 to 52 inches—olive yellow sandy clay loam that has light gray mottles

Substratum:
52 to 80 inches—light gray stratified sandy loam and sandy clay loam that has olive yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: Rare
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Wickham soils, which are in the higher positions
- Soils that are somewhat poorly drained and are in the slightly lower positions

Similar soils:
- Soils that are similar to the Altavista soil but have a loamy sand or silt loam surface texture

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility, flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Avoiding tillage when the soil is wet reduces clodding and crusting.
- Installing and maintaining an artificial drainage system reduce the wetness limitations and improve the productivity of the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.
- Areas within this map unit may need artificial drainage to maximize productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Competition from undesirable plants and equipment use
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.

- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Placing structures on the highest parts of the landscape reduces the risk of damage from flooding.
- Constructing dwellings on raised, well compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets
Suitability: Suited
Management concerns: Flooding, low strength, and wetness
Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Flooding makes this map unit difficult to manage and severely limits use during periods of inundation.
- Areas within this map unit may need a surface or subsurface drainage system.

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

BdB2—Badin-Tatum-Tallapoosa complex, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Broad ridges
Landform position: Convex summits

Shape of areas: Long and irregular
Size of areas: 20 to 100 acres

Composition

Badin and similar soils: 40 percent
Tatum and similar soils: 30 percent
Tallapoosa and similar soils: 20 percent
Dissimilar soils: 10 percent

Typical Profile

Badin
Surface layer:
0 to 5 inches—reddish brown loam

Subsoil:
5 to 20 inches—red clay
20 to 28 inches—red clay loam

Bedrock:
28 to 80 inches—highly weathered, red phyllite

Tatum
Surface layer:
0 to 5 inches—dark yellowish brown gravelly loam

Subsoil:
5 to 10 inches—strong brown loam
10 to 15 inches—yellowish red silty clay loam
15 to 31 inches—red clay loam
31 to 42 inches—red silty clay loam

Bedrock:
42 to 80 inches—highly weathered, red tilted phyllite

Tallapoosa
Surface layer:
0 to 4 inches—reddish brown gravelly loam

Subsurface layer:
4 to 8 inches—yellowish red gravelly loam

Subsoil:
8 to 12 inches—yellowish red clay loam
12 to 16 inches—red clay loam

Bedrock:
16 to 80 inches—highly weathered phyllite, slate, and sericite schist

Soil Properties and Qualities

Depth class: Badin—moderately deep; Tatum—deep; Tallapoosa—shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Badin—low; Tatum—moderate; Tallapoosa—low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Depth to bedrock: Badin—20 to 40 inches to soft bedrock; Tatum—40 to 60 inches to soft bedrock; Tallapoosa—10 to 20 inches to soft bedrock

Minor Components

Dissimilar soils:
- Fruithurst soils, which are in positions similar to those of the major soils but have a loamy subsoil and have bedrock at a depth of 20 to 40 inches
- The somewhat poorly drained Cartecay and Chewacla soils in narrow drainageways

Similar soils:
- Soils that are similar to the major soils but have a very gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, rooting depth, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Incorporating plant residue into the surface layer improves the water holding capacity of the soil.
- Using shallow rooted crops helps to overcome the moderately deep rooting depth of the soil.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of crops.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility, rooting depth, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- The moderately deep rooting depth of the Badin soil makes this map unit difficult to manage for pasture and hay crop production because of the low available water capacity.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of pasture and hay.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, seedling survival, windthrow hazard, and competition from undesirable plants

Management measures and considerations:
- Conservation practices, such as the use of water bars, drainage dips, and vegetation, help to control erosion in areas of this map unit.
- Increasing planting rates helps to offset the effects of seedling mortality.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Badin soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Potential of the Tatum soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Potential of the Tallapoosa soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility and rooting depth
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Badin and Tatum—suited; Tallapoosa—poorly suited
Management concerns: Depth to bedrock and shrink-swell
Management measures and considerations:
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and depth to bedrock
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- The addition of fill material increases the depth to bedrock.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Badin and Tatum—poorly suited; Tallapoosa—suited
Management concerns: Low strength and depth to bedrock
Management measures and considerations:
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Badin and Tatum—suited; Tallapoosa—poorly suited
Management concerns: Depth to bedrock and small stones
Management measures and considerations:
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

BfC—Badin-Tallapoosa-Fruithurst complex, 3 to 10 percent slopes

Setting

Landscape: Piedmont upland
Landform: Ridges and hillslopes
Landform position: Ridges
Shape of areas: Long and narrow or irregular
Size of areas: 50 to 500 acres

Composition

Badin and similar soils: 60 percent
Tallapoosa and similar soils: 20 percent
Fruithurst and similar soils: 10 percent
Dissimilar soils: 10 percent

Typical Profile

Badin
Surface layer:
0 to 5 inches—reddish brown loam

Subsoil:
5 to 20 inches—red clay
20 to 28 inches—red clay loam

Bedrock:
28 to 80 inches—highly weathered red phyllite

Tallapoosa
Surface layer:
0 to 4 inches—reddish brown gravelly loam

Subsurface layer:
4 to 8 inches—yellowish red gravelly loam

Subsoil:
8 to 12 inches—yellowish red clay loam
12 to 16 inches—red clay loam

Bedrock:
16 to 80 inches—highly weathered phyllite, slate, and sericite schist

Fruithurst
Surface layer:
0 to 3 inches—yellowish brown gravelly loam

Subsurface layer:
3 to 7 inches—light brown loam

Subsoil:
7 to 21 inches—yellowish red clay loam
21 to 30 inches—yellowish red silt loam

Bedrock:
30 to 80 inches—strong brown sericite schist

Soil Properties and Qualities

Depth class: Badin and Fruithurst—moderately deep; Tallapoosa—shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Badin—moderate; Tallapoosa—low; Fruithurst—low
Flooding: None
Content of organic matter in the surface layer: Moderate
Natural fertility: Low
Depth to bedrock: Badin and Fruithurst—20 to 40 inches to soft bedrock; Tallapoosa—10 to 20 inches to soft bedrock

Minor Components

Dissimilar soils:
- Tatum soils, which are deep to soft bedrock and are on the smooth parts of ridges
- The somewhat poorly drained Cartecay and Chewacla soils in narrow drainageways

Similar soils:
- Soils that are similar to the major soils but have a very gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, rooting depth, small stones, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Incorporating plant residue into the surface layer improves the water holding capacity of the soil.
- Using shallow rooted crops helps to overcome the moderately deep rooting depth of the soil.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of crops.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, rooting depth, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- The moderately deep rooting depth of the Badin and Fruithurst soils makes this map unit difficult to manage for pasture and hay crop production because of the low available water capacity.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of pasture and hay.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, seedling survival, windthrow hazard, and competition from undesirable plants
Management measures and considerations:
- Conservation practices, such as the use of water bars, drainage dips, and vegetation, help to control erosion in areas of this map unit.
- Increasing planting rates helps to offset the effects of seedling mortality.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Badin soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Potential of the Tallapoosa soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor
Potential of the Fruithurst soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and rooting depth
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Badin and Fruithurst—suited; Tallapoosa—poorly suited
Management concerns: Depth to bedrock and shrink-swell

Management measures and considerations:
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and depth to bedrock
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- The addition of fill material increases the depth to bedrock.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Badin and Fruithurst—poorly suited; Tallapoosa—suited
Management concerns: Low strength, steepness of slope, and depth to bedrock
Management measures and considerations:
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Badin and Fruithurst—suited; Tallapoosa—poorly suited
Management concerns: Depth to bedrock, steepness of slope, and small stones
Management measures and considerations:
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: Badin and Fruithurst—3e; Tallapoosa—4e
Prime farmland status: No
Hydric soil status: No

BuA—Buncombe loamy sand, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Piedmont and Coastal Plain valleys
Landform: Flood plains
Landform position: Slightly convex slopes and natural levees
Shape of areas: Long and irregular
Size of areas: 10 to 200 acres

Composition

Buncombe and similar soils: 70 percent
Dissimilar soils: 30 percent

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown loamy sand

Substratum:
9 to 33 inches—strong brown stratified loamy sand
33 to 53 inches—dark brown sand
53 to 80 inches—strong brown loamy sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Rapid
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: Frequent from February through May for very brief periods
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Toccoa soils, which are in similar or in slightly lower positions than the Buncombe soil and have a loamy subsoil
- The poorly drained Wehadkee soils in depressions

Similar soils:
- Buncombe soils that have a thin sandy loam surface

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Flooding, equipment use, and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Flooding, equipment use, and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.

- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:

- Using equipment that has wide tires or crawler-type equipment improves trafficability and minimizes rutting when the soil is moist.
- Planting seedlings on raised beds and increasing planting rates help establish seedlings and help to offset the effects of seedling mortality.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—very poor
Management concerns: Flooding
Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Unsuited
Management concerns: Flooding
Management measures and considerations:

- This map unit is severely limited for dwellings because of flooding. If possible, a site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns: Flooding and poor filtering capacity
Management measures and considerations:

- This map unit is severely limited for septic tank absorption fields because of flooding and poor filtering capacity.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets

Suitability: Poorly suited
Management concerns: Flooding

Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding and droughtiness
Management measures and considerations:
- This map unit is severely limited for lawns and landscaping because of flooding and droughtiness.

Interpretive Groups

Land capability subclass: 5w
Prime farmland status: No
Hydric soil status: No

CdB—Cecil-Urban land complex, 2 to 6 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 50 to 250 acres

Composition

Cecil and similar soils: 60 percent
Urban land: 30
Dissimilar soils: 10 percent

Typical Profile

Cecil
Surface layer:
0 to 4 inches—brown sandy loam

Subsoil:
4 to 12 inches—red clay loam
12 to 27 inches—red clay
27 to 39 inches—red clay that has strong brown mottles
39 to 64 inches—red clay loam that has strong brown mottles

Substratum:
64 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Urban land
Urban land consists of areas that are covered by buildings, houses, streets, driveways, parking lots, and other structures.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Pacolet and Wedowee soils, which are on narrow ridges and have a moderately deep subsoil

Similar soils:
- Soils that are similar to the Cecil soil but have a gravelly surface layer

Land Use

Dominant uses: Urban development, home and garden sites, and recreation

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Access to public sewage systems eliminates the need for onsite systems.
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: Cecil—2e; Urban land—8s
Prime farmland status: No
Hydric soil status: No

CeB2—Cecil sandy loam, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges

Landform position: Smooth and slightly convex summits
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Cecil and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—brown sandy loam

Subsoil:
4 to 12 inches—red clay loam
12 to 27 inches—red clay
27 to 39 inches—red clay that has strong brown mottles
39 to 64 inches—red clay loam that has strong brown mottles

Substratum:
64 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The moderately well drained Hard Labor soils, which are in the slightly lower positions
- Pacolet and Wedowee soils, which are in narrow positions or the more choppy positions and have a moderately deep subsoil

Similar soils:
- Soils that are similar to the Cecil soil but have a gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

CeC2—Cecil sandy loam, 6 to 10 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Smooth and slightly convex summits and side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Cecil and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—brown sandy loam

Subsoil:
4 to 12 inches—red clay loam
12 to 27 inches—red clay
27 to 39 inches—red clay that has strong brown mottles
39 to 64 inches—red clay loam that has strong brown mottles

Substratum:
64 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Soils in the slightly lower positions that have less clay in the subsoil than the Cecil soil and are brown
- The moderately well drained Hard Labor soils, which are in the lower toeslope positions
- Wedowee soils, which are in positions similar to those of the Cecil soil but have a thinner, brown subsoil

Similar soils:
- Pacolet soils, which are in positions similar to those of the Cecil soil but have a thinner subsoil

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland

Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland

Suitability: Well suited to pasture; suited to hayland (fig. 3)
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Figure 3.—An area of Cecil sandy loam, 6 to 10 percent slopes, moderately eroded. This well drained, clayey soil is suited to hayland. Erodibility is a management concern for this soil.

- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope

Management measures and considerations:

- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

CHA—Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded

Setting

Landscape: Piedmont and upper Coastal Plain valleys
Landform: Flood plains
Landform position: Chewacla and Cartecay—smooth to slightly concave slopes; Toccoa—convex slopes and natural levees
Shape of areas: Long and narrow
Size of areas: 50 to 500 acres

Composition

Chewacla and similar soils: 55 percent
Cartecay and similar soils: 30 percent
Toccoa and similar soils: 10 percent
Dissimilar soils: 5 percent

Typical Profile

Chewacla
Surface layer:
0 to 2 inches—dark grayish brown silty clay loam
2 to 6 inches—grayish brown silty clay loam

Subsoil:
6 to 12 inches—yellowish red silty clay loam
12 to 20 inches—reddish brown silty clay loam that has grayish brown iron depletions
20 to 27 inches—brown loam that has gray iron depletions
27 to 38 inches—yellowish brown clay loam that has light gray iron depletions
38 to 53 inches—yellowish brown clay loam that has strong brown masses of oxidized iron

Substratum:
53 to 80 inches—light olive brown silt loam that has yellowish brown and strong brown masses of oxidized iron and light gray iron depletions

Cartecay
Surface layer:
0 to 3 inches—dark brown sandy clay loam

Substratum:
3 to 13 inches—brown fine sandy loam
13 to 18 inches—strong brown fine sandy loam that has dark brown stains
18 to 32 inches—brown fine sandy loam that has yellowish brown masses of oxidized iron and grayish brown iron depletions

32 to 47 inches—grayish brown gravelly fine sandy loam that has yellowish brown masses of oxidized iron
47 to 80 inches—grayish brown fine sandy loam

Toccoa
Surface layer:
0 to 4 inches—dark brown fine sandy loam

Substratum:
4 to 28 inches—strong brown stratified sandy loam and loamy sand
28 to 36 inches—dark yellowish brown sandy loam
36 to 43 inches—dark brown silt loam
43 to 80 inches—light yellowish brown sandy loam that has yellowish brown masses of oxidized iron

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Chewacla and Cartecay—somewhat poorly drained; Toccoa—well drained
Permeability: Chewacla—moderate; Cartecay and Toccoa—moderately rapid
Available water capacity: Chewacla—high; Cartecay and Toccoa—low
Seasonal high water table: Chewacla and Cartecay—apparent, at a depth 0.5 to 1.5 feet from November through April; Toccoa—apparent, at a depth 2.5 to 5.0 feet from December through April
Shrink-swell potential: Low
Flooding: Frequent for brief periods
Content of organic matter in the surface layer: Chewacla and Cartecay—moderate; Toccoa—low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The moderately well drained Altavista soils in adjacent terrace positions
- The poorly drained Wehadkee soils in depressional areas
- The excessively drained Buncombe soils on high natural levees next to stream channels

Similar soils:
- Areas that are similar to the major soils but have a gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- The potential for flooding during the growing season makes soils in this map unit difficult to manage for cropland.
- Delaying spring planting because of wetness from the seasonal high water table helps to prevent clodding and rutting caused by equipment.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Fescue and dallisgrass
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.
- Areas within this map unit may need artificial drainage to maximize productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high
Management concerns: Equipment use, windthrow hazard, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Chewacla soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Potential of the Cartecay soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Potential of the Toccoa soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Flooding and wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for dwellings because of flooding. If possible, another site should be selected on better suited soils.
- Placing structures on the highest part of the landscape and using artificial drainage systems reduce the risk of damage from flooding and wetness.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of flooding and wetness.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Wetness, flooding, and low strength
Management measures and considerations:
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of these soils.
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Flooding makes this map unit difficult to manage for lawns and landscaping and severely limits use during periods of inundation.
- Areas within this unit may need a surface or subsurface drainage system.

Interpretive Groups

Land capability subclass: Chewacla—4w; Cartecay—5w; Toccoa—3w
Prime farmland status: No
Hydric soil status: No

CoB—Cowarts loamy sand, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Ridges and hillslopes
Landform position: Smooth to slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 10 to 100 acres

Composition

Cowarts and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—brown gravelly sandy loam

Subsurface layer:
3 to 9 inches—yellowish brown sandy loam

Subsoil:
9 to 24 inches—yellowish brown sandy clay loam

24 to 37 inches—yellowish brown sandy clay loam that has strong brown and red masses of oxidized iron

Substratum:
37 to 70 inches—variegated yellowish brown, red, and light gray sandy clay loam that has a thin strata of sandy loam
70 to 80 inches—variegated dusky red, strong brown, and white clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate in the solum and moderately slow in the substratum
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Marvyn soils, which are on the smoother and broader ridges
- Springhill soils, which are on convex ridges and side slopes

Similar soils:
- Areas of soils that are similar to the Cowarts soil and have a sandy loam, gravelly sandy loam, or gravelly loamy sand surface layer

Land Use

Dominant uses: Pasture, hayland, and woodland
Other uses: Cropland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife can be improved by constructing shallow ponds that provide open water areas for water fowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
- Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

CoC—Cowarts loamy sand, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Ridges and side slopes
Landform position: Convex ridgetops and side slopes
Shape of areas: Irregular
Size of areas: 10 to 150 acres

Composition

Cowarts and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 3 inches—brown gravelly loamy sand

Subsurface layer:
3 to 9 inches—yellowish brown sandy loam

Subsoil:
9 to 24 inches—yellowish brown sandy clay loam
24 to 37 inches—yellowish brown sandy clay loam that has strong brown and red masses of oxidized iron

Substratum:
37 to 70 inches—variegated yellowish brown, red, and light gray sandy clay loam that has a thin strata of sandy loam
70 to 80 inches—variegated dusky red, strong brown, and white clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate in the solum and moderately slow in the substratum
Available water capacity: Moderate
Seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Marvyn soils, which are on smoother, broader ridges than the Cowarts soil
- Springhill soils, which are in positions similar to those of the Cowarts soil and have a red subsoil
- Uchee soils, which have sandy surface and subsurface layers that have a combined thickness of 20 to 40 inches

Similar soils:
- Areas of soils that are similar to the Cowarts soil but have a sandy loam, gravelly sandy loam, or gravelly loamy sand surface layer

Land Use

Dominant uses: Pasture, hayland, and woodland
Other uses: Cropland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability

Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
- Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

CrD—Cowart gravelly sandy loam, 8 to 15 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Side slopes
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 20 to 500 acres

Composition

Cowarts and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 3 inches—brown gravelly sandy loam

Subsurface layer:
3 to 9 inches—yellowish brown sandy loam

Subsoil:
9 to 24 inches—yellowish brown sandy clay loam
24 to 37 inches—yellowish brown sandy clay loam that has strong brown and red masses of oxidized iron

Substratum:
37 to 70 inches—variegated yellowish brown, red, and light gray sandy clay loam that has a thin strata of sandy loam
70 to 80 inches—variegated dusky red, strong brown, and white clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate in the solum and slow in the substratum
Available water capacity: Moderate

Seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Springhill soils, which are in positions similar to those of the Cowarts soil and have a red subsoil
- Uchee soils, which have sandy surface and subsurface layers that have a combined thickness of 20 to 40 inches

Similar soils:
- Areas of soils that are similar to the Cowarts soil but have a sandy loam, gravelly sandy loam, or gravelly loamy sand surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness, rock fragment content, and steepness of slope
Management measures and considerations:
- Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 6e
Prime farmland status: No
Hydric soil status: No

CwE—Cowarts-Uchee complex, 15 to 25 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Hillslopes

Landform position: Cowarts—upper and middle, smooth to convex side slopes; Uchee—lower, smooth side slopes and smooth toeslopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Cowarts and similar soils: 45 percent
Uchee and similar soils: 35 percent
Dissimilar soils: 20 percent

Typical Profile

Cowarts
Surface layer:
0 to 3 inches—brown gravelly sandy loam

Subsurface layer:
3 to 9 inches—yellowish brown sandy loam

Subsoil:
9 to 24 inches—yellowish brown sandy clay loam
24 to 37 inches—yellowish brown sandy clay loam that has strong brown and red masses of oxidized iron

Substratum:
37 to 70 inches—variegated yellowish brown, red, and light gray sandy clay loam that has a thin strata of sandy loam
70 to 80 inches—variegated dusky red, strong brown, and white clay

Uchee
Surface layer:
0 to 6 inches—brown loamy sand

Subsurface layer:
6 to 21 inches—yellowish brown loamy sand
21 to 29 inches—yellowish brown sandy loam

Subsoil:
29 to 50 inches—strong brown sandy clay loam

Substratum:
50 to 64 inches—variegated yellowish red, strong brown, brownish yellow, and light gray stratified and streaked sandy clay loam and sandy loam
64 to 80 inches—variegated brownish yellow, light gray, and red stratified and streaked sandy clay loam and sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Cowarts—moderately well drained; Uchee—well drained
Permeability: Cowarts—moderate in the upper part and moderately slow in the lower part; Uchee—rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, and moderately slow in the lower part of the subsoil
Available water capacity: Low
Seasonal high water table: Cowarts—more than 6.0 feet; Uchee—perched, at a depth of 3.5 to 5.0 feet from January through April
Shrink-swell potential: Cowarts—low; Uchee—moderate in the lower part
Flooding: None

Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The poorly drained Kinston soils and the moderately well drained Iuka soils in narrow drainageways
- Springhill soils, which are in positions similar to those of the Cowarts soil and have a red subsoil
- A few small areas of soils that have a loamy or gravelly surface layer

Similar soils:
- A few small areas of soils that have a very gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Droughtiness, equipment limitations, erodibility, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Cowarts—equipment use and competition from undesirable plants; Uchee—erodibility, equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Constructing roads, fire breaks, and skid trails on the contour and establishing permanent plant cover on roads and landings following logging operations reduce the hazard of erosion and help to control siltation of streams.
- Using tracked or low-pressure ground equipment helps to prevent rutting and the damage caused to tree roots by compaction.
- Increasing planting rates helps to offset the effects of seedling mortality.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Steepness of slope and erodibility

Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Steepness of slope

Management measures and considerations:

- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Steepness of slope, restricted permeability, and wetness

Management measures and considerations:

- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets

Suitability: Poorly suited

Management concerns: Steepness of slope

Management measures and considerations:

- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping

Suitability: Poorly suited

Management concerns: Steepness of slope

Management measures and considerations:

- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 7e

Prime farmland status: No

Hydric soil status: No

DAM—Dam

This map unit includes the Martin, Thurlow, and Yates Dams. The Martin (fig. 4) and Thurlow Dams are the sites of hydroelectric facilities. These dams are concrete

Figure 4.—Martin Dam, located on the Tallapoosa River south of Dadeville. This dam is a major hydroelectric facility in Tallapoosa County.

barriers that obstruct the flow of water from the Tallapoosa River and form Martin Lake.

EnB—Enon-Wynott complex, 2 to 6 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Convex shoulders and smooth slopes
Shape of areas: Irregular
Size of areas: 20 to 200 acres

Composition

Enon and similar soils: 70 percent
Wynott and similar soils: 20 percent
Dissimilar soils: 10 percent

Typical Profile

Enon
Surface layer:
0 to 4 inches—dark brown very gravelly sandy loam
4 to 9 inches—light olive brown gravelly sandy loam

Subsurface layer:
9 to 12 inches—light olive brown gravelly sandy clay loam

Subsoil:
12 to 25 inches—brownish yellow clay that has black manganese concretions
25 to 50 inches—yellow clay that has black manganese concretions

Substratum:
50 to 65 inches—yellow clay loam
65 to 80 inches—variegated loam

Wynott
Surface layer:
0 to 8 inches—brown gravelly sandy loam

Subsurface layer:
8 to 12 inches—light olive brown gravelly sandy loam

Subsoil:
12 to 32 inches—yellowish brown clay
32 to 38 inches—variegated yellowish brown, brownish yellow, white, and strong brown clay loam

Substratum:
38 to 80 inches—variegated grayish green and white highly weathered mafic rock

Soil Properties and Qualities

Depth class: Enon—very deep; Wynott—moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Enon—high; Wynott—low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: High
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Enon—more than 60 inches; Wynott—20 to 40 inches to weathered bedrock

Minor Components

Dissimilar soils:
- Mecklenburg soils, which have redder colors in the subsoil than the major soils
- Winnsboro soils, which are deep to bedrock

Similar soils:
- Areas of soils that are similar to the Enon and Wynott soils but have an extremely gravelly surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high
Management concerns: Erodibility, equipment use, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Enon soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Potential of the Wynott soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited

Management concerns: Enon—restricted permeability; Wynott—restricted permeability and depth to bedrock

Management measures and considerations:

- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets

Suitability: Poorly suited

Management concerns: Shrink-swell, depth to bedrock, and low strength

Management measures and considerations:

- Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate improve soil performance.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Lawns and landscaping

Suitability: Enon—well suited; Wynott—suited

Management concerns: Enon—no significant limitations; Wynott—depth to bedrock

Management measures and considerations:

- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: Enon—2e; Wynott—3e

Prime farmland status: No

Hydric soil status: No

EuA—Eunola sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain valleys

Landform: Stream terraces

Landform position: Slightly convex slopes

Shape of areas: Long and irregular

Size of areas: 10 to 100 acres

Composition

Eunola and similar soils: 80 percent

Dissimilar soils: 20 percent

Typical Profile

Surface layer:

0 to 8 inches—dark grayish brown sandy loam

Subsoil:

8 to 20 inches—yellowish brown sandy clay loam

20 to 40 inches—yellowish brown sandy clay loam that has olive yellow and red masses of oxidized iron and light grayish brown iron depletions

Substratum:
40 to 54 inches—stratified sandy loam, sandy clay loam, and clay in shades of yellow, brown, and red
54 to 80 inches—red stratified sandy loam, sandy clay loam, and clay that has strong brown, yellowish brown, and light gray iron depletions

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: None
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The well drained Cowarts and Marvyn soils in the slightly higher positions
- The poorly drained Kinston soils in depressions

Similar soils:
- Areas that are similar to the Eunola soil but have a loamy sand surface layer

Land Use

Dominant uses: Hayland and cropland
Other uses: Pasture and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Avoiding tillage when the soil is wet reduces clodding and crusting.
- Installing and maintaining an artificial drainage system reduce the wetness limitations and improve the productivity of these soils.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.
- Areas within this map unit may need artificial drainage to maximize productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Competition from undesirable plants and equipment use
Management measures and considerations:

- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:

- Constructing dwellings on raised, well compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:

- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets

Suitability: Suited
Management concerns: Wetness
Management measures and considerations:

- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of the soil.

Lawns and landscaping

Suitability: Suited
Management concerns: Wetness
Management measures and considerations:

- Areas within this map unit may need a surface or subsurface drainage system.

Interpretive Groups

Land capability subclass: 2w
Prime farmland status: No
Hydric soil status: No

FaA—Fluvaquents, 0 to 1 percent slopes, ponded

Setting

Landscape: Coastal Plain and Piedmont
Landform: Flood plains and low terraces
Landform position: Sloughs, swales, and other depressional areas
Shape of areas: Rounded or oblong
Size of areas: 10 to 100 acres

Composition

Fluvaquents and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 6 inches—dark grayish brown sandy loam

Substratum:
6 to 80 inches—stratified sandy loam to clay in shades of gray and brown

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Variable
Available water capacity: Variable
Seasonal high water table: Apparent, at a depth 2.0 feet above the surface to a depth of 1.0 foot below the soil surface from January through December
Shrink-swell potential: Variable
Flooding: Frequent
Content of organic matter in the surface layer: High
Natural fertility: Medium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- The moderately well drained Altavista and Eunola soils and the somewhat poorly drained Chewacla soils in the slightly higher areas along the edges of map units

Land Use

Dominant uses: Woodland and wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Flooding, ponding, and wetness
Management measures and considerations:
- This map unit is severely limited for crop production because of flooding, ponding, and wetness. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Unsuited
Management concerns: Flooding, ponding, and wetness
Management measures and considerations:
- This map unit is severely limited for pasture and hayland because of the flooding, ponding, and wetness. If possible, another site should be selected on better suited soils.

Woodland

Suitability: Poorly suited
Productivity class: High for blackgum and green ash
Management concerns: Equipment use and seedling survival
Management measures and considerations:
- The best method for reforesting areas of this soil is by managing for natural regeneration of hardwoods.
- Using tracked or low-pressure ground equipment helps to prevent rutting and the damage caused to tree roots by compaction.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.
- Maintaining drainageways and planting trees that are tolerant of wetness increase the seedling survival rates.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—good
Management concerns: Equipment use, ponding, flooding, and wetness
Management measures and considerations:
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers

Dwellings

Suitability: Unsuited
Management concerns: Ponding
Management measures and considerations:
- This map unit is severely limited for dwellings because of ponding. If possible, another site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns: Ponding and wetness
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of ponding and wetness.

Local roads and streets

Suitability: Unsuited
Management concerns: Ponding and low strength
Management measures and considerations:
- This map unit is severely limited for local roads and streets because of ponding.

Lawns and landscaping

Suitability: Unsuited
Management concerns: Ponding
Management measures and considerations:
- This map unit is severely limited for lawns and landscaping because of ponding and flooding.

Interpretive Groups

Land capability subclass: 7w
Prime farmland status: No
Hydric soil status: Yes

GrA—Greenville sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain valleys
Landform: Summits on terraces
Landform position: Smooth to slightly convex slopes
Shape of areas: Broad to long and irregular
Size of areas: 20 to 200 acres

Composition

Greenville and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 8 inches—dark reddish brown sandy loam

Subsurface layer:
8 to 13 inches—dark reddish brown sandy clay loam

Subsoil:
13 to 80 inches—dark red sandy clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Marvyn soils, which have less clay in the subsoil than the Greenville soil
- Springhill soils, which are in convex positions and have a loamy subsoil

Similar soils:
- Areas of soils that are similar to the Greenville soil but do not have a dark red subsoil

Land Use

Dominant uses: Cropland
Other uses: Pasture, hayland, and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Soil fertility
Management measures and considerations:
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass
Management concerns: Soil fertility
Management measures and considerations:
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 1
Prime farmland status: Yes
Hydric soil status: No

GrB—Greenville sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain valleys
Landform: Summits on terraces
Landform position: Smooth to slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 10 to 100 acres

Composition

Greenville and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 8 inches—dark reddish brown sandy loam

Subsurface layer:
8 to 13 inches—dark reddish brown sandy clay loam

Subsoil:
13 to 80 inches—dark red sandy clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Marvyn soils, which have less clay and less yellow in the subsoil than the Greenville soil
- Springhill soils, which are in convex positions and have a loamy subsoil

Similar soils:
- Areas of soils that are similar to the Greenville soil but do not have a dark red subsoil

Land Use

Dominant uses: Cropland
Other uses: Pasture, hayland, and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

GuB—Greenville-Urban land complex, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain valleys
Landform: Summits on terraces
Landform position: Smooth to slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Greenville and similar soils: 60 percent
Urban land: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Greenville
Surface layer:
0 to 8 inches—dark brown sandy loam

Subsoil:
8 to 13 inches—dark reddish brown sandy clay loam
13 to 80 inches—dark red sandy clay

Urban land
Urban land consists of areas that are covered by buildings, houses, streets, driveways, parking lots, and other structures.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Marvyn soils, which have less clay and less yellow in the subsoil than the Greenville soil
- Springhill soils, which are in convex positions and have a loamy subsoil

Similar soils:
- Areas of soils that are similar to the Greenville soils but do not have a dark red subsoil

Land Use

Dominant uses: Homesites, gardens, urban development, and recreation

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Moderately suited
Management concerns: Restricted permeability
Management measures and considerations:
- Access to public sewage systems eliminates the need for onsite systems.
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: Greenville—2e; Urban land—8s
Prime farmland status: No
Hydric soil status: No

GvD2—Gwinnett-Lloyd complex, 6 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Smooth to slightly convex side slopes
Shape of areas: Irregular
Size of areas: 20 to 500 acres

Composition

Gwinnett and similar soils: 45 percent
Lloyd and similar soils: 35 percent
Dissimilar soils: 20 percent

Typical Profile

Gwinnett
Surface layer:
0 to 3 inches—dark reddish brown gravelly sandy loam

Subsoil:
3 to 18 inches—dark red clay loam
18 to 30 inches—dark red clay

Substratum:
30 to 45 inches—dark red sandy clay loam saprolite

Bedrock:
45 to 80 inches—dark colored hornblende gneiss

Lloyd
Surface layer:
0 to 4 inches—dark reddish brown loam

Subsoil:
4 to 16 inches—dark reddish brown clay
16 to 28 inches—dark red clay
28 to 43 inches—red clay
43 to 56 inches—red silty clay loam

Substratum:
53 to 80 inches—strong brown silt loam

Soil Properties and Qualities

Depth class: Gwinnett—deep; Lloyd—very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Rapid
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Gwinnett—40 to 60 inches: Lloyd—more than 60 inches

Minor Components

Dissimilar soils:
- Agricola soils, which are in positions similar to those of the major soils and are moderately deep to bedrock
- The somewhat poorly drained Cartecay and Chewacla soils in drainageways
- Pacolet soils, which are in the lower side slope positions and are very deep to bedrock
- Soils that are in shoulder positions and are shallow to bedrock

Similar soils:
- Soils that have a loam or very gravelly surface layer

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility

Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability, depth to bedrock, and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- The addition of fill material increases the depth to bedrock.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope and small stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 4e
Prime farmland status: No
Hydric soil status: No

GwE2—Gwinnett-Agricola complex, 15 to 25 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Gwinnett—smooth side slopes; Agricola—middle to upper part of smooth side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Gwinnett and similar soils: 50 percent
Agricola and similar soils: 30 percent
Dissimilar soils: 20 percent

Typical Profile

Gwinnett
Surface layer:
0 to 3 inches—dark reddish brown gravelly sandy loam

Subsoil:
3 to 18 inches—dark red clay loam
18 to 30 inches—dark red clay

Substratum:
30 to 45 inches—dark red sandy clay loam saprolite

Bedrock:
45 to 80 inches—highly weathered hornblende gneiss

Agricola
Surface layer:
0 to 3 inches—dark reddish brown gravelly loam

Subsurface:
3 to 6 inches—reddish brown gravelly loam

Subsoil:
6 to 13 inches—dark red clay loam
13 to 24 inches—dark red clay
24 to 35 inches—red clay loam

Bedrock:
35 to 80 inches—highly weathered hornblende gneiss

Soil Properties and Qualities

Depth class: Gwinnett—deep; Agricola—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Rapid
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Gwinnett—40 to 60 inches to soft bedrock; Agricola—20 to 40 inches to soft bedrock

Minor Components

Dissimilar soils:
- The somewhat poorly drained Cartecay and Chewacla soils in narrow drainageways
- Lloyd soils, which are very deep to bedrock
- Soils that have more than 35 percent rock fragments in the subsoil
- Soils that are shallow to bedrock and have less than 35 percent clay in the subsoil

Similar soils:
- A few small areas that have a very gravelly surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high

Management concerns: Erodibility, equipment use, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Gwinnett—steepness of slope; Agricola—steepness of slope and depth to bedrock
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability, steepness of slope, and depth to bedrock
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope and low strength
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 6e
Prime farmland status: No
Hydric soil status: No

HdB—Hard Labor loamy sand, 2 to 6 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Uplands
Landform position: Smooth to slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Hard Labor and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 2 inches—very dark grayish brown loamy sand
2 to 9 inches—brown loamy sand

Subsurface layer:
9 to 15 inches—light yellowish brown loamy sand

Subsoil:
15 to 27 inches—strong brown clay
27 to 45 inches—yellowish red clay that has light yellowish brown iron depletions
45 to 52 inches—strong brown sandy clay loam that has light gray iron depletions

Substratum:
52 to 80 inches—variegated sandy clay loam saprolite in shades of red, brown, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High

Seasonal high water table: Apparent, at a depth of 2.5 to 5.0 feet from November through April
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The well drained Cecil and Pacolet soils, which are in the higher positions and have a red subsoil
- The poorly drained Wehadkee soils in depressions and narrow drainageways

Similar soils:
- Areas of soils that are similar to the Hard Labor soil but are in the slightly higher positions and have less clay in the subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Terraces and diversions, stripcropping, contour tillage, no-till, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping

Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

HdC—Hard Labor loamy sand, 6 to 10 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Side slopes
Landform position: Smooth to slightly convex slopes

Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Hard Labor and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 2 inches—very dark grayish brown loamy sand
2 to 9 inches—brown loamy sand

Subsurface layer:
9 to 15 inches—light yellowish brown loamy sand

Subsoil:
15 to 27 inches—strong brown clay
27 to 45 inches—yellowish red clay that has light yellowish brown iron depletions
45 to 52 inches—strong brown sandy clay loam that has light gray iron depletions

Substratum:
52 to 80 inches—variegated sandy clay loam saprolite in shades of red, brown, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 2.5 to 5.0 feet from November through April
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The well drained Cecil and Pacolet soils, which are in the higher positions and have a red subsoil
- The somewhat poorly drained Chewacla soils on flood plains
- The well drained Wedowee soils in the higher positions

Similar soils:
- Areas of soils that are in the slightly higher positions and have less clay in the subsoil than the Hard Labor soil

Land Use

Dominant uses: Pasture, hayland, and woodland

Cropland
Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.

- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope and wetness
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability, steepness of slope, and wetness
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.

- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing the distribution lines on the contour improves system performance.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

HiB2—Hiwassee loam, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Stream terraces
Landform position: Slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Hiwassee and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark reddish brown loam

Subsoil:
4 to 60 inches—dark red clay loam
60 to 80 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Mecklenburg soils, which are in the higher positions

Similar soils:
- Areas of soils that are similar to the Hiwassee soil but have a clay loam surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small

tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

KnA—Kinston-Iuka complex, 0 to 1 percent slopes, frequently flooded

Setting

Landscape: Coastal Plain valleys
Landform: Flood plains
Landform position: Kinston—smooth and slightly concave slopes; Iuka—slightly convex slopes
Shape of areas: Oblong to long and narrow
Size of areas: 20 to 500 acres

Composition

Kinston and similar soils: 60 percent
Iuka and similar soils: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Kinston
Surface layer:
0 to 3 inches—dark brown silt loam
3 to 7 inches—gray silt loam

Substratum:
7 to 20 inches—gray silt loam that has dark yellowish brown masses of oxidized iron
20 to 40 inches—light gray sandy clay loam that has dark yellowish brown and strong brown masses of oxidized iron
40 to 80 inches—gray loam

Iuka
Surface layer:
0 to 5 inches—dark brown sandy loam
5 to 10 inches—dark brown sandy loam

Substratum:
10 to 21 inches—dark yellowish brown sandy loam that has light brownish gray iron depletions and strong brown masses of oxidized iron
21 to 36 inches—dark grayish brown loam that has brown masses of oxidized iron
36 to 42 inches—gray sandy loam that has yellowish brown and yellowish red masses of oxidized iron
42 to 80 inches—light gray loamy sand that has olive brown and olive yellow masses of oxidized iron

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Kinston—poorly drained; Iuka—moderately well drained
Permeability: Moderate
Available water capacity: Kinston—high; Iuka—low
Seasonal high water table: Kinston—apparent, at the surface to a depth of 1.0 foot from November through June; Iuka—apparent, at a depth of 1.0 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: Frequent for brief periods
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- The moderately well drained Eunola soils on the higher, adjacent terraces
- Soils that are somewhat poorly drained
- Soils that are poorly drained and have less clay in the subsoil

Similar soils:
- Kinston and Iuka soils that have a gravelly surface layer

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for cropland because of flooding and wetness. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bahiagrass and bermudagrass

Management concerns: Flooding and wetness
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Planting seedlings on raised beds and increasing planting rates help establish seedlings and help to offset the effects of seedling mortality.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Kinston soil to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—fair
Potential of the Iuka soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—poor
Management concerns: Flooding and wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding, wetness, and restricted permeability
Management measures and considerations:
- This map unit is severely limited for dwellings because of flooding. If possible, another site should be selected on better suited soils.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of flooding and wetness. The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding, wetness, and low strength

Management measures and considerations:
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of these soils.
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for lawns and landscaping because of flooding and wetness. If possible, another site should be selected on better suited soils.

Interpretive Groups

Land capability subclass: Kinston—6w; Iuka—5w
Prime farmland status: No
Hydric soil status: Yes

LdB2—Lloyd loam, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Lloyd and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 4 inches—dark reddish brown loam

Subsoil:
4 to 16 inches—dark reddish brown clay
16 to 28 inches—dark red clay
28 to 43 inches—red clay
43 to 56 inches—red silty clay loam

Substratum:
56 to 80 inches—strong brown silt loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low

Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Gwinnett soils, which are on knolls and have soft bedrock at depth of 40 to 60 inches
- Mecklenburg soils, which have base saturation greater than 35 percent

Similar soils:
- Cecil soils, which are in positions similar to those of the Lloyd soil but do not have a dark red subsoil
- Areas of soils that are similar to the Lloyd soil but have a gravelly surface texture

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.

- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: Yes
Hydric soil status: No

LnB—Lloyd-Urban land complex, 2 to 6 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Lloyd and similar soils: 55 percent
Urban land: 35
Dissimilar soils: 10 percent

Typical Profile

Lloyd
Surface layer:
0 to 4 inches—dark reddish brown loam

Subsoil:
4 to 16 inches—dark reddish brown clay
16 to 28 inches—dark red clay

28 to 43 inches—red clay
43 to 56 inches—red silty clay loam

Substratum:
56 to 80 inches—strong brown silt loam

Urban land

Urban land consists of areas that are covered by buildings, houses, streets, driveways, parking lots, and other structures. A typical profile has not been selected.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Gwinnett soils, which are on knolls and have soft bedrock at a depth of 40 to 60 inches
- Mecklenburg soils, which have base saturation greater than 35 percent

Similar soils:
- Cecil soils, which are in positions similar to those of the Lloyd soil but do not have a dark red subsoil
- Areas of soils that are similar to the Lloyd soil but have a gravelly surface texture

Land Use

Dominant uses: Urban development, home and garden sites, and recreation

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Access to public sewage systems eliminates the need for onsite systems.
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: Lloyd—3e, Urban—8s
Prime farmland status: No
Hydric soil status: No

LoF—Louisa-Mountain Park complex, 30 to 50 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Hillslopes and escarpments
Landform position: Smooth and convex side slopes
Shape of areas: Irregular
Size of areas: 20 to 200 acres

Composition

Louisa and similar soils: 65 percent
Mountain Park and similar soils: 25 percent
Dissimilar soils: 10 percent

Typical Profile

Louisa
Surface layer:
0 to 3 inches—brown loam

Subsoil:
3 to 10 inches—strong brown loam
10 to 17 inches—yellowish red sandy clay loam

Bedrock:
17 to 80 inches—dark yellowish brown, highly weathered, soft mica schist

Mountain Park
Surface layer:
0 to 4 inches—dark yellowish brown gravelly sandy loam

Subsurface layer:
4 to 10—brown gravelly sandy loam

Subsoil:
10 to 23 inches—yellowish red gravelly sandy clay loam
23 to 32 inches—yellowish red gravelly sandy loam

Bedrock:
32 to 46 inches—strong brown and yellowish red soft mica schist
46 to 55 inches—strong brown sandy loam saprolite
55 to 80 inches—moderately hard mica schist

Soil Properties and Qualities

Depth class: Louisa—shallow; Mountain Park—moderately deep
Drainage class: Louisa—somewhat excessive drained; Mountain Park—well drained
Permeability: Louisa—moderately rapid; Mountain Park—moderate
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet

Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Louisa—10 to 20 inches to soft bedrock; Mountain Park—20 to 40 inches to soft bedrock

Minor Components

Dissimilar soils:
- Madison soils, which are on shoulder slopes, have a clayey subsoil, and are very deep
- Rion soils, which are in the lower positions on side slopes and have a loamy subsoil
- A few small areas of soils that have a subsoil that has more than 35 percent rock fragments

Similar soils:
- A few small areas of soils that have a gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Unsuited to pasture and hayland
Management concerns: Steepness of slope
Management measures and considerations:
- This map unit is severely limited for pasture and hay crop production because of steepness of slope.

Woodland
Suitability: Poorly suited
Productivity class: Moderately high
Management concerns: Erodibility, equipment use, seedling survival, windthrow hazard, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Using cable logging methods helps to overcome equipment limitations and helps prevent the acceleration of erosion caused by the construction of roads and skid trails and the disturbance of the forest floor caused by heavy machinery.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—very poor
Management concerns: Steepness of slope

Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock
Management measures and considerations:
- The local health department can be contacted for additional guidance regarding sanitary facilities.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 7e
Prime farmland status: No
Hydric soil status: No

LrD—Louisburg-Rion-Rock outcrop complex, 6 to 15 percent slopes, very bouldery

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Louisburg—smooth and convex side slopes; Rion—middle part of smooth side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Louisburg and similar soils: 45 percent
Rion and similar soils: 35 percent
Rock outcrop: 10 percent
Dissimilar soils: 10 percent

Typical Profile

Louisburg
Surface layer:
0 to 8 inches—dark yellowish brown gravelly sandy loam

Subsurface layer:
8 to 15 inches—very pale brown gravelly sandy loam

Subsoil:
15 to 21 inches—yellowish brown sandy loam that has brownish yellow mottles
21 to 35 inches—strong brown sandy loam

Substratum:
35 to 64 inches—pale brown and strong brown sandy loam and sandy clay loam
64 to 80 inches—variegated, weathered granite gneiss

Rion
Surface layer:
0 to 5 inches—dark brown gravelly sandy loam

Subsurface layer:
5 to 16 inches—yellowish brown sandy clay loam

Subsoil:
16 to 32 inches—yellowish red clay loam
32 to 39 inches—strong brown sandy clay loam

Substratum:
39 to 80 inches—variegated sandy loam saprolite in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Louisburg—rapid; Rion—moderate
Available water capacity: Louisburg—low; Rion—moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None

Rock fragments on the surface: About 0.1 to 3.0 percent of the surface is covered with stones and boulders that are an average of 30 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The somewhat poorly drained Cartecay soils in narrow drainageways
- A few small areas of soils that have a subsoil that has more than 35 percent rock fragments

Similar soils:
- A few small areas of soils that have a gravelly surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope and equipment use
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope and equipment use. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high
Management concerns: Erodibility, equipment use, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Using cable logging methods helps to overcome the limitations to road and trail construction caused by the large number of stones and boulders on the surface.

- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.

Wildlife habitat

Potential of the Louisburg soil to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—very poor

Potential of the Rion soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Steepness of slope and large stones

Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Steepness of slope and large stones

Management measures and considerations:

- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Large stones and boulders may be encountered during excavation.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Steepness of slope and large stones

Management measures and considerations:

- Large stones and boulders may be encountered during excavation of trenches.
- Installing the distribution lines on the contour improves system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets

Suitability: Poorly suited

Management concerns: Steepness of slope and large stones

Management measures and considerations:

- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Large stones and boulders may be encountered during excavation

Lawns and landscaping

Suitability: Poorly suited

Management concerns: Steepness of slope and large stones

Management measures and considerations:

- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.

Interpretive Groups

Land capability subclass: Louisburg—6s; Rion—4e; Rock outcrop—8s
Prime farmland status: No
Hydric soil status: No

LrE—Louisburg-Rion-Rock outcrop complex, 15 to 35 percent slopes, very bouldery

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Louisburg—smooth and convex side slopes; Rion—middle part of smooth side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Louisburg and similar soils: 40 percent
Rion and similar soils: 40 percent
Rock Outcrop: 10 percent
Dissimilar soils: 10 percent

Typical Profile

Louisburg
Surface layer:
0 to 8 inches—dark yellowish brown gravelly sandy loam

Subsurface layer:
8 to 15 inches—very pale brown gravelly sandy loam

Subsoil:
15 to 21 inches—yellowish brown sandy loam that has brownish yellow mottles
21 to 35 inches—strong brown sandy loam

Substratum:
35 to 64 inches—pale brown and strong brown sandy loam and sandy clay loam
64 to 80 inches—variegated, weathered granite gneiss

Rion
Surface layer:
0 to 5 inches—dark brown gravelly sandy loam

Subsurface layer:
5 to 16 inches—yellowish brown sandy clay loam

Subsoil:
16 to 32 inches—yellowish red clay loam
32 to 39 inches—strong brown sandy clay loam

Substratum:
39 to 80 inches—variegated sandy loam saprolite in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Louisburg—rapid; Rion—moderate

Available water capacity: Louisburg—low; Rion—moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Rock fragments on the surface: About 0.1 to 3.0 percent of the surface is covered with stones and boulders that are an average of 30 inches across and are about 50 feet apart.
Extent of rock outcrop: 15 percent
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- A few small areas of Cartecay soils in narrow drainageways
- A few small areas of soils that have a subsoil that has more than 35 percent rock fragments

Similar soils:
- A few small areas of soils that have a gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope and equipment use
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope and equipment use. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Poorly suited to pasture; unsuited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Louisburg—droughtiness, erodibility, equipment use, and soil fertility; Rion—erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Steepness of slope makes this map unit difficult to manage for pasture and hayland.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- Removing stones or limiting equipment use to the less stony areas increases the productivity of these soils.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited (fig. 5)
Productivity class: Moderately high
Management concerns: Louisburg—erodibility, equipment use, and competition from undesirable plants; Rion—erodibility, equipment use, and competition from undesirable plants.

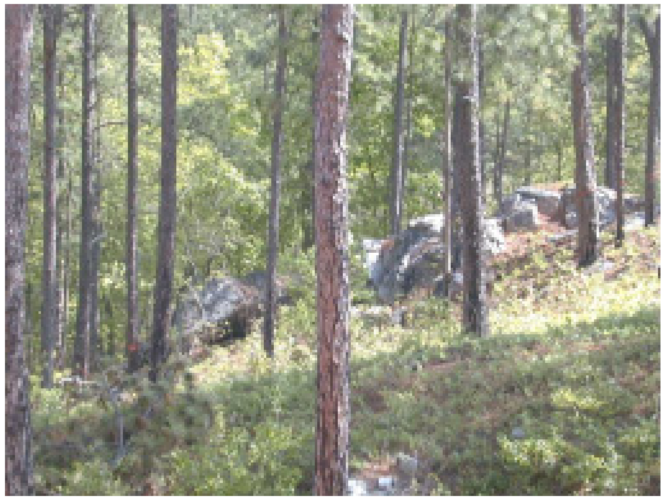

Figure 5.—An area of Louisburg-Rion-Rock outcrop complex, 15 to 35 percent slopes, very bouldery. This map unit is suited to woodland, but equipment use is a management concern.

Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using cable logging methods helps to overcome the limitations to road and trail construction caused by the large number of stones and boulders on the surface.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential of the Louisburg soil to support habitat for: Openland wildlife and wetland wildlife—very poor; woodland wildlife—poor

Potential of the Rion soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Steepness of slope

Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Large stones and boulders may be encountered during excavation of trenches.
- Installing the distribution lines on the contour improves system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Large stones and boulders may be encountered during excavation

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.

Interpretive Groups

Land capability subclass: Louisburg—7s; Rion—7e; Rock outcrop—8s
Prime farmland status: No
Hydric soil status: No

MaB2—Madison fine sandy loam, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Smooth summits and slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 10 to 100 acres

Composition

Madison and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown fine sandy loam

Subsoil:
4 to 10 inches—yellowish red sandy clay loam
10 to 23 inches—red clay
23 to 28 inches—red sandy clay loam

Substratum:
28 to 40 inches—red sandy clay loam saprolite weathered from mica schist
40 to 80 inches—yellowish brown sandy loam saprolite weathered from mica schist

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Rion soils, which are in the lower positions on side slopes and have less clay in the subsoil than the Madison soil
- Louisa soils, which are in the lower positions on side slopes and have less clay in the subsoil than the Madison soil

Similar soils:
- Areas of soils that are similar to the Madison soil but have a gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited

Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.

Local roads and streets
Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

MaD2—Madison fine sandy loam, 6 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Knolls, ridges, and side slopes
Landform position: Convex summits and side slopes
Shape of areas: Irregular
Size of areas: 20 to 500 acres

Composition

Madison and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown fine sandy loam

Subsoil:
4 to 10 inches—yellowish red sandy clay loam
10 to 23 inches—red clay
23 to 28 inches—red sandy clay loam

Substratum:
28 to 40 inches—red sandy clay loam saprolite weathered from mica schist
40 to 80 inches—yellowish brown sandy loam saprolite weathered from mica schist

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Rapid
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Louisa soils, which are in the steeper positions, have less clay in the subsoil and have a less developed subsoil than the Madison soil, and have soft bedrock at a depth of less than 20 inches
- Mountain Park soils, which are in the steeper positions, have less clay and more mica in the subsoil than the Madison soil, and have soft bedrock at a depth of 20 to 40 inches
- Rion soils, which are in the lower positions on side slopes and have a loamy subsoil

Similar soils:
- A few areas of soils that are similar to the Madison soil but have a loamy or gravelly surface layer

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures on the contour to conform to the natural slope or building in the less sloping areas helps to overcome the slope limitations.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 4e
Prime farmland status: No
Hydric soil status: No

MdE2—Madison-Louisa complex, 15 to 30 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Madison—smooth side slopes; Louisa—middle part of convex side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Madison and similar soils: 60 percent
Louisa and similar soils: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Madison
Surface layer:
0 to 4 inches—dark brown fine sandy loam

Subsurface layer:
4 to 10 inches—yellowish red sandy clay loam

Subsoil:
10 to 23 inches—red clay
23 to 28 inches—red sandy clay loam

Substratum:
28 to 40 inches—variegated sandy clay loam saprolite weathered from mica schist that has pockets of subsoil material
40 to 80 inches— yellowish brown sandy loam saprolite weathered from mica schist

Louisa
Surface layer:
0 to 3 inches—brown loam

Subsoil:
3 to 10 inches—strong brown loam
10 to 17 inches—yellowish red sandy clay loam

Bedrock:
17 to 80 inches—dark yellowish brown highly weathered mica schist

Soil Properties and Qualities

Depth class: Madison—very deep; Louisa—shallow
Drainage class: Well drained
Permeability: Madison—moderate; Louisa—moderately rapid
Available water capacity: Madison—high; Louisa—low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Madison—more than 60 inches; Louisa—10 to 20 inches to soft bedrock

Minor Components

Dissimilar soils:
- Mountain Park soils, which are in the steeper positions and have less clay and more mica in the subsoil than the major soils
- Rion soils, which are in the lower positions on side slopes and have a loamy subsoil

Similar soils:
- A few areas of soils that are similar to the Madison soil but have a loamy or gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope

Management measures and considerations:
- This map unit is severely limited to crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland

Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Madison—erodibility, equipment use, and soil fertility; Louisa—erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces soil erosion and increase germination.
- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- The shallow rooting depth of the Louisa soil makes this map unit difficult to manage for the economical production of pasture and hay.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland

Suitability: Suited
Productivity class: Moderately high
Management concerns: Madison—erodibility, equipment use, and competition from undesirable plants; Louisa—erodibility, equipment use, seedling survival, windthrow hazard, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential of the Madison soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Potential of the Louisa soil to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility and steepness of slope
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Madison—steepness of slope; Louisa—steepness of slope and depth to bedrock

Management measures and considerations:

- Designing structures on the contour to conform to the natural slope or building in the less sloping areas helps to overcome the slope limitations.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Madison—steepness of slope; Louisa—steepness of slope and depth to bedrock

Management measures and considerations:

- The local health department can be contacted for additional guidance regarding sanitary facilities.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets

Suitability: Poorly suited

Management concerns: Madison—steepness of slope and low strength; Louisa—steepness of slope and depth to bedrock

Management measures and considerations:

- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Lawns and landscaping

Suitability: Poorly suited

Management concerns: Madison—steepness of slope and erodibility; Louisa—steepness of slope, droughtiness, and depth to bedrock

Management measures and considerations:

- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 7e
Prime farmland status: No
Hydric soil status: No

MnA—Marvyn sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Interfluves
Landform position: Smooth and slightly convex slopes

Shape of areas: Long and irregular
Size of areas: 20 to 100 acres

Composition

Marvyn and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 7 inches—brown sandy loam

Subsoil:
7 to 26 inches—yellowish brown sandy clay loam
26 to 36 inches—strong brown sandy clay loam that has yellowish red masses of oxidized iron
36 to 47 inches—yellowish brown sandy clay that has strong brown masses of oxidized iron

Substratum:
47 to 80 inches—variegated yellowish brown, strong brown, and light gray sandy loam that has strata of sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Cowarts soils, which are in the more convex positions
- Uchee soils, which are in positions similar to those of the Marvyn soil but have thick sandy surface and subsurface layers

Similar soils:
- Areas of soils that are similar to the Marvyn soil but have more than 5 percent plinthite in the lower part of the subsoil

Land Use

Dominant uses: Hayland and cropland
Other uses: Pasture and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Soil fertility
Management measures and considerations:
- Minimizing tillage increases organic matter and maximizes rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Soil fertility
Management measures and considerations:

- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:

- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:

- The size of the absorption field should be increased or an alternate system of sewage disposal should be used.

Local roads and streets

Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping

Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 1
Prime farmland status: Yes
Hydric soil status: No

MrB—Marvyn loamy sand, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Interfluves
Landform position: Smooth and slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 20 to 300 acres

Composition

Marvyn and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 8 inches—brown loamy sand

Subsoil:
8 to 22 inches—yellowish brown sandy clay loam
22 to 37 inches—strong brown sandy clay loam
37 to 60 inches—yellowish brown sandy clay that has yellowish red and strong brown masses of oxidized iron

Substratum:
60 to 80 inches—variegated yellowish red, brownish yellow, and red clay that has strata of sandy loam and sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Cowarts soils, which are in the more convex positions
- Greenville soils, which are in the slightly higher positions and have a clayey subsoil
- Springhill soils, which are on convex ridges and side slopes

Similar soils:
- Areas of soils that are similar to the Marvyn soil but have a sandy loam surface layer

Land Use

Dominant uses: Hayland and cropland
Other uses: Pasture and woodland

Cropland
Suitability: Well suited (fig. 6)
Commonly grown crops: Cotton and corn
Management concerns: Erodibility and soil fertility

Figure 6.—An area of Marvyn loamy sand, 2 to 5 percent slopes. This well drained, loamy soil is well suited to cropland and responds well to conservation practices, such as conservation tillage.

Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
- The size of the absorption field should be increased or an alternate system of sewage disposal should be used.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

MW—Miscellaneous water

This map unit consists of areas of water that generally are unsuited for consumptive use. Areas include sewage lagoons, fish hatcheries, livestock waste lagoons, sediment ponds, and industrial waste-water holding ponds.

MwB2—Mecklenburg gravelly sandy loam, 2 to 6 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges
Landform position: Smooth summits and slightly convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Mecklenburg and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 4 inches—reddish brown gravelly sandy loam

Subsoil:
4 to 15 inches—red clay
15 to 25 inches—red clay that has brownish yellow mottles
25 to 33 inches—red and brownish yellow clay loam

Substratum:
33 to 60 inches—variegated loam saprolite in shades of red, brown, and yellow and red clay loam
60 to 80 inches—strong brown and yellowish brown loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Moderate
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Lloyd soils, which are in the higher positions and have a dark red subsoil
- Pacolet soils, which have base saturation less than 35 percent

Similar soils:
- Areas of soil that are similar to the Mecklenburg soil but have a yellow subsoil

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass

Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Shrink-swell
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevent the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: Small stones
Management measures and considerations:
- Topsoil from disturbed areas should be stockpiled and then replaced before landscaping.

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

MxD2—Mecklenburg gravelly loam, 6 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Summits and smooth and slightly convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

Mecklenburg and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—reddish brown gravelly loam

Subsoil:
4 to 15 inches—red clay
15 to 25 inches—red clay that has brownish yellow mottles
25 to 33 inches—red and brownish yellow clay loam

Substratum:
33 to 60 inches—variegated loam saprolite in shades of red, brown, and yellow and red clay loam
60 to 80 inches—strong brown and yellowish brown loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Lloyd soils, which are in the higher positions and have a dark red subsoil

- Pacolet soils, which have base saturation less than 35 percent

Similar soils:
- Areas of soils that are similar to the Mecklenburg soil but have a yellow subsoil

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Shrink-swell and steepness of slope
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevent the damage caused by shrinking and swelling.
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope and small stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 4e
Prime farmland status: No
Hydric soil status: No

PaC2—Pacolet gravelly sandy loam, 3 to 10 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Convex summits and slightly convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Pacolet and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown gravelly sandy loam

Subsoil:
4 to 9 inches—dark yellowish brown and red clay loam
9 to 36 inches—red clay

Substratum:
36 to 56 inches—variegated sandy loam and red clay
56 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Cecil soils, which are in the smoother positions and have a deeper subsoil than the Pacolet soil
- Wedowee soils, which are in positions similar to those of the Pacolet soil and have a brown subsoil

Similar soils:
- Soils that are similar to the Pacolet soil but have a sandy loam surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.

- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing distribution lines on the contour improves performance of septic tank absorption fields.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Well suited
Management concerns: Steepness of slope and small stones

Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

PrD2—Pacolet-Rion complex, 6 to 15 percent slopes, moderately eroded, stony

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Smooth summits and slightly convex side slopes
Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

Pacolet and similar soils: 55 percent
Rion and similar soils: 25 percent
Dissimilar soils: 20 percent

Typical Profile

Pacolet
Surface layer:
0 to 4 inches—dark yellowish brown gravelly sandy loam

Subsoil:
4 to 9 inches—dark yellowish brown and red clay loam
9 to 36 inches—red clay

Substratum:
36 to 56 inches—variegated sandy loam and red clay
56 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Rion
Surface layer:
0 to 5 inches—dark brown gravelly sandy loam

Subsurface layer:
5 to 16 inches—yellowish brown sandy clay loam

Subsoil:
16 to 32 inches—yellowish red clay loam
32 to 39 inches—strong brown sandy clay loam

Substratum:
39 to 80 inches—variegated sandy loam saprolite in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Rock fragments on the surface: About 0.01 to 0.1 percent of the surface is covered with cobbles and stones that are an average of 12 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Louisburg soils, which are in positions on the middle of side slopes and lack a developed subsoil
- The somewhat poorly drained Cartecay soils in narrow drainageways
- Wedowee soils, which are in similar positions and have a brown subsoil

Similar soils:
- Pacolet and Rion soils that have a cobbly or stony surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited (fig. 7)
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor

Management concerns: Erodibility

Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Suited

Management concerns: Steepness of slope

Management measures and considerations:

- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields

Suitability: Suited

Management concerns: Restricted permeability and steepness of slope

Figure 7.—A thinned stand of loblolly pine in an area of Pacolet-Rion complex, 6 to 15 percent slopes, moderately eroded, stony. This map unit is well suited to the production of loblolly pine.

Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing distribution lines on the contour improves performance of septic tank absorption fields.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: Steepness of slope and small stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 4e
Prime farmland status: No
Hydric soil status: No

PrE2—Pacolet-Rion complex, 15 to 25 percent slopes, moderately eroded, stony

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Pacolet—side slopes; Rion—lower part of smooth side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Pacolet and similar soils: 60 percent
Rion and similar soils: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Pacolet
Surface layer:
0 to 4 inches—dark yellowish brown gravelly sandy loam

Subsoil:
4 to 9 inches—dark yellowish brown and red clay loam
9 to 36 inches—red clay

Substratum:
36 to 56 inches—variegated sandy loam and red clay
56 to 80 inches—variegated sandy loam saprolite in shades of red, brown, and yellow

Rion
Surface layer:
0 to 5 inches—dark brown gravelly sandy loam

Subsurface layer:
5 to 16 inches—yellowish brown sandy clay loam

Subsoil:
16 to 32 inches—yellowish red clay loam
32 to 39 inches—strong brown sandy clay loam

Substratum:
39 to 80 inches—variegated sandy loam saprolite in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Rock fragments on the surface: About 0.01 to 0.1 percent of the surface is covered with cobbles and stones that are an average of 12 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Louisburg soils, which are in positions on the middle of side slopes and lack a developed subsoil
- The somewhat poorly drained Cartecay soils in narrow drainageways
- Wedowee soils, which are in positions similar to those of the major soils and have a brown subsoil

Similar soils:
- Pacolet and Rion soils that have a cobbly or stony surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slopes
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Woodland

Suitability: Suited
Productivity class: Moderately high
Management concerns: Erodibility and equipment use
Management measures and considerations:

- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility and steepness of slope
Management measures and considerations:

- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:

- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Large stones may be encountered during excavation.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Steepness of slope, restricted permeability, and large stones
Management measures and considerations:

- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing distribution lines on the contour improves performance of septic tank absorption fields.
- Large stones may be encountered during excavation.

Local roads and streets

Suitability: Poorly suited

Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Careful planning of road location minimizes the need to remove large stones.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope and large stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.

Interpretive Groups

Land capability subclass: 6e
Prime farmland status: No
Hydric soil status: No

Pt—Pits, borrow

Setting

Landscape: Coastal Plain and Piedmont
Landform: Ridgetops, hillslopes, and terraces
Landform position: Summits, shoulders, side slopes, and interfluves
Shape of areas: Rectangular or horseshoe-shaped
Size of areas: 5 to 20 acres

Composition

Pits: 90 percent
Dissimilar components: 10 percent

Typical Profile

This map unit consists of open excavations from which the original soil and underlying material have been removed for use at another location. Typically, the remaining material consists of strata of sand, gravel, and mixed earthy materials. A typical pedon has not been selected.

Soil Properties and Qualities

Depth class: Variable
Drainage class: Variable
Permeability: Variable
Available water capacity: Variable
Depth to seasonal high water table: Variable
Shrink-swell potential: Variable
Flooding: None to rare
Natural fertility: Low
Depth to bedrock: More than 60 inches
Other distinctive properties: Discontinuous layers, streaks, or pockets of variable texture

Minor Components

Dissimilar soils:
- Cowarts, Greenville, Marvyn, Pacolet, Springville, and Wedowee soils on uplands that are near the edges of the map unit
- Altavista, Eunola, and Wickham soils on terraces that are on the edges of the map unit
- Small depressions that are intermittently ponded

Land Use

Dominant uses: Source of gravel, clay, and fill material
Other uses: Unsuited to most other uses

Extensive reclamation efforts are required to make areas suitable for use as cropland, pasture, hayland, woodland, homesites, or wildlife habitat. Onsite investigation and testing are needed to determine the suitability of areas of this map unit for any use.

Interpretive Groups

Land capability subclass: 8s
Prime farmland status: No
Hydric soil status: No

SgD—Springhill sandy loam, 5 to 15 percent slopes

Setting

Landscape: Coastal Plain uplands
Landform: Hillslopes
Landform position: Smooth and convex side slopes
Shape of areas: Irregular
Size of areas: 20 to 100 acres

Composition

Springhill and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 5 inches—dark brown sandy loam
5 to 8 inches—brown sandy loam

Subsurface layer:
8 to 12 inches—brown sandy loam
12 to 17 inches—strong brown sandy loam

Subsoil:
17 to 37 inches—red sandy clay loam
37 to 52 inches—red sandy clay loam that has brownish yellow masses of oxidized iron
52 to 59 inches—red sandy loam that has brownish yellow masses of oxidized iron
59 to 63 inches—yellowish red sandy loam that has brownish yellow masses of oxidized iron

Substratum:
63 to 80 inches—variegated strong brown, red, and grayish brown sandy clay loam that has a thin strata of sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- Cowarts soils, which are in positions that are similar to those of the Springhill soil but have a yellower subsoil that is moderately deep
- Greenville soils, which are on shoulders and have a dark red, clayey subsoil
- Uchee soils, which have sandy surface and subsurface layers that have a combined thickness of 20 to 40 inches

Similar soils:
- Areas of soils that are similar to the Springhill soil but have a gravelly sandy loam or gravelly loamy sand surface layer

Land Use

Dominant uses: Woodland and pasture
Other uses: Hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from unwanted plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Installing distribution lines on the contour improves performance of septic tank absorption fields.

Local roads and streets
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 6e
Prime farmland status: No
Hydric soil status: No

TbD2—Tallapoosa-Badin-Fruithurst complex, 6 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Badin and Tallapoosa—upper and middle side slopes; Fruithurst—lower side slopes and toeslopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Tallapoosa and similar soils: 40 percent
Badin and similar soils: 25 percent
Fruithurst and similar soils: 25 percent
Dissimilar soils: 10 percent

Typical Profile

Tallapoosa
Surface layer:
0 to 4 inches—reddish brown gravelly loam

Subsurface layer:
4 to 8 inches—yellowish red gravelly loam

Subsoil:
8 to 12 inches—yellowish red clay loam
12 to 16 inches—red clay loam

Bedrock:
16 to 80 inches—highly weathered phyllite, slate, and sericite schist

Badin
Surface layer:
0 to 5 inches—reddish brown loam

Subsoil:
5 to 20 inches—red clay
20 to 28 inches—red clay loam

Bedrock:
28 to 80 inches—highly weathered red phyllite

Fruithurst
Surface layer:
0 to 3 inches—yellowish brown gravelly loam

Subsurface layer:
3 to 7 inches—light brown loam

Subsoil:
7 to 21 inches—yellowish red clay loam
21 to 30 inches—yellowish red silt loam

Bedrock:
30 to 80 inches—strong brown sericite schist

Soil Properties and Qualities

Depth class: Tallapoosa—shallow; Badin and Fruithurst—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: High
Natural fertility: Low
Depth to bedrock: Tallapoosa—10 to 20 inches to soft bedrock; Fruithurst and Badin—20 to 40 inches to soft bedrock

Minor Components

Dissimilar soils:
- The somewhat poorly drained Cartecay and Chewacla soils in narrow drainageways
- A few small areas of soils that have a subsoil that has more than 35 percent rock fragments

Similar soils:
- Soils that are similar to the major soils but have a very gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, steepness of slope, rooting depth, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Incorporating plant residue into the surface layer improves the water holding capacity of the soil.
- Using shallow rooted crops helps to overcome the moderately deep rooting depth of the Badin and Fruithurst soils.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of crops.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, rooting depth, steepness of slope, and soil fertility
Management measures and considerations:
- Contour farming and controlled grazing help to control erosion.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.

- The moderately deep rooting depth of the Badin soil makes this map unit difficult to manage for pasture and hay crop production because of the low available water capacity.
- The shallow rooting depth of the Tallapoosa soil makes this map unit difficult to manage for the economical production of pasture and hay.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, windthrow hazard, and competition from undesirable plants
Management measures and considerations:
- Conservation practices, such as the use of water bars, drainage dips, and vegetation, help to control erosion in areas of this map unit.
- Increasing planting rates helps to offset the effects of seedling mortality.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Tallapoosa soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor
Potential of the Badin soil to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Potential of the Fruithurst soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and rooting depth
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell, depth to bedrock, and steepness of slope
Management measures and considerations:
- Land smoothing helps to overcome the slope limitation.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock
Management measures and considerations:
- Installing the distribution lines on the contour improves system performance.
- The addition of fill material increases the depth to bedrock.

Local roads and streets
Suitability: Poorly suited
Management concerns: Tallapoosa—slope; Fruithurst—slope and low strength

Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Tallapoosa—slope and depth to bedrock; Fruithurst—slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: Tallapoosa—6e; Badin and Fruithurst—4e
Prime farmland status: No
Hydric soil status: No

TfE2—Tallapoosa-Fruithurst complex, 15 to 40 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Tallapoosa—upper and middle side slopes; Fruithurst—lower side slopes and toeslopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Tallapoosa and similar soils: 60 percent
Fruithurst and similar soils: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Tallapoosa
Surface layer:
0 to 4 inches—reddish brown gravelly loam

Subsurface layer:
4 to 8 inches—yellowish red gravelly loam

Subsoil:
8 to 12 inches—yellowish red clay loam
12 to 16 inches—red clay loam

Bedrock:
16 to 80 inches—highly weathered phyllite, slate, and sericite schist

Fruithurst
Surface layer:
0 to 3 inches—yellowish brown gravelly loam

Subsurface layer:
3 to 7 inches—light brown loam

Subsoil:
7 to 21 inches—yellowish red clay loam
21 to 30 inches—yellowish red silt loam

Bedrock:
30 to 80 inches—strong brown sericite schist

Soil Properties and Qualities

Depth class: Tallapoosa—shallow; Fruithurst—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: High
Natural fertility: Low
Depth to bedrock: Tallapoosa—10 to 20 inches to soft bedrock; Fruithurst—20 to 40 inches to soft bedrock

Minor Components

Dissimilar soils:
- Badin soils, which are on shoulders and narrow ridgetops and are moderately deep to bedrock
- The somewhat poorly drained Cartecay and Chewacla soils in narrow drainageways
- A few small areas of soils that have a subsoil that has more than 35 percent rock fragments

Similar soils:
- Tallapoosa and Fruithurst soils that have a very gravelly surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Tallapoosa—steepness of slope, erodibility, depth to bedrock, and soil fertility; Fruithurst—steepness of slope, erodibility, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Terraces and diversions, contour tillage, and grassed waterways reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.
- If possible, another site should be selected on better suited soils.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Tallapoosa—steepness of slope, erodibility, depth to bedrock, and soil fertility; Fruithurst—steepness of slope, erodibility, and soil fertility

Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high
Management concerns: Tallapoosa—erodibility, equipment use, seedling mortality, and windthrow hazard; Fruithurst—erodibility and equipment use
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Tallapoosa soil to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—very poor
Potential of the Fruithurst soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and steepness of slope
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Tallapoosa—steepness of slope and depth to bedrock; Fruithurst—steepness of slope
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Steepness of slope and depth to bedrock

Management measures and considerations:
- Installing distribution lines on the contour improves performance of septic tank absorption fields.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- The addition of fill material increases the depth to bedrock.

Local roads and streets
Suitability: Poorly suited
Management concerns: Tallapoosa—steepness of slope; Fruithurst—steepness of slope and low strength
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Tallapoosa—steepness of slope and depth to bedrock; Fruithurst—steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 7e
Prime farmland status: No
Hydric soil status: No

ToA—Toccoa fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landscape: Piedmont and Coastal Plain valleys
Landform: Flood plains
Landform position: Slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 10 to 100 acres

Composition

Toccoa and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown fine sandy loam

Substratum:
4 to 28 inches—strong brown stratified sandy loam and loamy sand
28 to 36 inches—dark yellowish brown sandy loam
36 to 43 inches—dark brown silt loam
43 to 80 inches—light yellowish brown sandy loam that has yellowish brown masses of oxidized iron

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth 2.5 to 5.0 feet from December through April
Shrink-swell potential: Low
Flooding: Rare, from March through May for brief durations
Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The excessively drained Buncombe soils, which are on the lower, flooded levees and are sandy throughout
- The somewhat poorly drained Chewacla and Cartecay soils in drainageways
- The poorly drained Wehadkee soils in depressions

Similar soils:
- A few areas of soils that have a loamy sand surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Flooding and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Flooding and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Using tracked or low-pressure ground equipment helps to prevent rutting and the damage caused to tree roots by compaction.
- Restricting the use of standard wheeled and tracked equipment to dry periods reduces rutting and compaction that occur when the soil is saturated.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Building structures on the highest part of the landscape reduces the risk of damage from flooding.
- Constructing dwellings on raised, well compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of flooding and wetness. The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Suited
Management concerns: Flooding

Management measures and considerations:
- Flooding makes this map unit difficult to manage for lawns and landscaping and severely limits use during periods of inundation.
- Areas within this unit may need a surface or subsurface drainage system.

Interpretive Groups

Land capability subclass: 2w
Prime farmland status: Yes
Hydric soil status: No

Ur—Urban land

Setting

Landscape: Coastal Plain and Piedmont
Landform: Uplands
Landform position: Ridges and side slopes
Shape of areas: Irregular
Size of areas: Generally 10 to 200 acres

Composition

Urban land: 85 percent
Dissimilar components: 15 percent

Typical Profile

This map unit consists of mostly paved and built-up areas, such as buildings, houses, streets, driveways, and parking lots, where the original soil has been disturbed.

Minor Components

Dissimilar soils:
- A few small areas of unaltered soils
- Areas where the surface layer has been removed by grading
- A few small, moderately built-up areas where structures cover only 50 to 85 percent of the surface

Land Use

Dominant uses: Residential, commercial, and industrial uses

Extensive reclamation efforts are required to make areas suitable for use as cropland, pasture, hayland, woodland, homesites, or wildlife habitat. Onsite investigation and testing are needed to determine the suitability of areas of this unit for any use.

Interpretive Groups

Land capability subclass: 8s
Prime farmland status: No
Hydric soil status: No

W—Water

This map unit consists of areas that are covered with water throughout the year. Areas include rivers, streams, natural or constructed lakes, pits, and ponds.

WeC2—Wedowee gravelly sandy loam, 3 to 10 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Wedowee and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 2 inches—dark brown gravelly sandy loam

Subsurface layer:
2 to 5 inches—light yellowish brown sandy loam

Subsoil:
5 to 15 inches—yellowish red clay
15 to 28 inches—yellowish red clay that has brownish yellow mottles
28 to 34 inches—strong brown sandy clay loam that has brownish yellow and light yellowish brown mottles

Substratum:
34 to 60 inches—variegated sandy loam saprolite in shades of brown, red, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Pacolet soils, which are in positions similar to those of the Wedowee soil and have a deeper subsoil
- The moderately well drained Hard Labor soils, which are in the lower positions and have a deep subsoil

Similar soils:
- Soils that are similar to the Wedowee soil but have a sandy loam surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat

Cropland
Suitability: Suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability and steepness of slope

Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope and small stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 3e
Prime farmland status: No
Hydric soil status: No

WeD2—Wedowee gravelly sandy loam, 6 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 20 to 300 acres

Composition

Wedowee and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 2 inches—dark brown gravelly sandy loam

Subsurface layer:
2 to 5 inches—light yellowish brown sandy loam

Subsoil:
5 to 15 inches—yellowish red clay
15 to 28 inches—yellowish red clay that has brownish yellow mottles
28 to 34 inches—strong brown sandy clay loam that has brownish yellow and light yellowish brown mottles

Substratum:
34 to 80 inches—variegated sandy loam saprolite in shades of brown, red, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Pacolet soils, which are in positions similar to those of the Wedowee soil and have a redder subsoil
- The moderately well drained Hard Labor soils, which are in the lower positions and have a deep subsoil
- Louisburg and Rion soils, which are in the steeper positions and have a loamy subsoil

Similar soils:
- Soils that are similar to the Wedowee soil but have a sandy loam surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: Moderately high for loblolly pine

Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 4e
Prime farmland status: No
Hydric soil status: No

WfE—Wedowee very gravelly sandy loam, 15 to 35 percent slopes

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Wedowee and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 2 inches—dark brown very gravelly sandy loam

Subsurface layer:
2 to 5 inches—light yellowish brown sandy loam

Subsoil:
5 to 15 inches—yellowish red clay
15 to 28 inches—yellowish red clay that has brownish yellow mottles
28 to 34 inches—strong brown sandy clay loam that has brownish yellow and light yellowish brown mottles

Substratum:
34 to 80 inches—variegated sandy loam saprolite in shades of brown, red, and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- Pacolet soils, which are in positions similar to those of the Wedowee soil and have a redder subsoil
- The moderately well drained Hard Labor soils, which are in the lower positions and have a deep subsoil
- Louisburg and Rion soils, which are in the steeper positions and have a loamy subsoil

Similar soils:
- Soils that are similar to the Wedowee soil but have a sandy loam surface layer

Land Use

Dominant uses: Woodland and woodland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope, erodibility, and soil fertility
Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and steepness of slope
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Steepness of slope
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Installing distribution lines on the contour improves performance of septic tank absorption fields.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope and low strength
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope and small stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.

Interpretive Groups

Land capability subclass: 7e
Prime farmland status: No
Hydric soil status: No

WgC—Wedowee-Saw complex, 2 to 10 percent slopes, very bouldery

Setting

Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Wedowee and similar soils: 60 percent
Saw and similar soils: 30 percent
Dissimilar soils: 10 percent

Typical Profile

Wedowee
Surface layer:
0 to 2 inches—dark brown gravelly sandy loam

Subsurface layer:
2 to 5 inches—light yellowish brown sandy loam

Subsoil:
5 to 15 inches—yellowish red clay
15 to 28 inches—yellowish red clay that has brownish yellow mottles
28 to 34 inches—strong brown sandy clay loam that has brownish yellow and light yellowish brown mottles

Substratum:
34 to 60 inches—variegated sandy loam saprolite in shades of brown, red, and yellow

Saw
Surface layer:
0 to 5 inches—dark grayish brown sandy loam

Subsurface layer:
5 to 9 inches—pale yellow sandy loam

Subsoil:
9 to 15 inches—yellowish brown clay
15 to 23 inches—reddish yellow clay that has pale yellow, olive yellow, light grayish brown, and red mottles
23 to 31 inches—yellow sandy clay loam that has olive yellow and red mottles

Substratum:
31 to 34 inches—variegated sandy loam saprolite in shades of brown, red, and yellow

Bedrock:
34 to 80 inches—unweathered, moderately fractured granodioritic gneiss

Soil Properties and Qualities

Depth class: Wedowee—very deep; Saw—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Rock fragments on the surface: About 0.1 to 3.0 percent of the surface is covered with stones and boulders that are an average of 30 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Wedowee—more than 60 inches; Saw—20 to 40 inches to hard bedrock

Minor Components

Dissimilar soils:
- Louisburg and Rion soils, which are on shoulders and have a loamy subsoil

Similar soils:
- Areas of soils that are similar to the major soils but have a red subsoil

Land Use

Dominant uses: Woodland and woodland wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Equipment use and erodibility
Management measures and considerations:
- This map unit is severely limited for crop production because of equipment use. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and coastal bermudagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, and competition from undesirable plants
Management measures and considerations:
- Conservation practices, such as the use of water bars, drainage dips, and vegetation, help to control erosion in areas of this map unit.
- Using cable logging methods helps to overcome the limitations to road and trail construction caused by the large number of stones and boulders on the surface.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Equipment use and erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Large stones, depth to bedrock, and steepness of slope

Management measures and considerations:
- Large stones and boulders may be encountered during excavation.
- Drilling and blasting rock or using special earthmoving equipment increases the depth of these soils.
- Designing structures to conform to the natural slope helps to overcome the limitations caused by the slope.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability, large stones, depth to bedrock, and steepness of slope
Management measures and considerations:
- Increasing the size of the absorption field improves system performance.
- Installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- Large stones and boulders may be encountered during excavation.
- Locating and installing septic tank absorption fields in the deeper soils in the map unit may improve system performance.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Suited
Management concerns: Low strength, depth to bedrock, and steepness of slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- Blasting or using special grading equipment may be needed when constructing roads in areas of the Saw soil.
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Depth to bedrock, large stones, and steepness of slope
Management measures and considerations:
- The moderately deep rooting depth of the Saw soil makes it difficult to establish and maintain lawns and landscaping, especially if the soil has been significantly disturbed during construction.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability subclass: 6s
Prime farmland status: No
Hydric soil status: No

WhA—Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Piedmont valleys
Landform: Flood plains

Landform position: Smooth to slightly concave slopes
Shape of areas: Long and narrow
Size of areas: 50 to 200 acres

Composition

Wehadkee and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown silt loam

Subsoil:
4 to 20 inches—gray loam that has yellowish brown mottles

Substratum:
20 to 40 inches—gray stratified sandy loam and loam that has yellowish brown mottles
40 to 80 inches—dark gray loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at the surface to 1.0 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent for brief periods
Content of organic matter in the surface layer: Moderate
Natural fertility: Low
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar soils:
- The somewhat poorly drained Chewacla soils in the slightly higher and broader areas of the flood plain
- The somewhat poorly drained Cartecay soils in the slightly higher positions near the streambank

Similar soils:
- Soils that are similar to the Wehadkee soil but have a clayey subsoil

Land Use

Dominant uses: Woodland and wetland wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for crop production because of flooding and wetness. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Commonly grown crops: Bermudagrass and fescue
Management concerns: Flooding and wetness

Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Equipment use, seedling survival, windthrow hazard, and competition from undesirable plants
Management measures and considerations:
- Using tracked or low-pressure ground equipment helps to prevent rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds and increasing planting rates help establish seedlings and help to offset the effects of seedling mortality.
- Restricting timber operations to dry periods, especially with consideration for the seasonal flooding, reduces the risk of damage from flooding.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife and wetland wildlife—fair
Management concerns: Flooding and wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for dwellings because of flooding. If possible, another site should be selected on better suited soils.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of flooding and wetness. The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Wetness, flooding, and low strength
Management measures and considerations:
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of the soil.

- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is severely limited for lawns and landscaping because of flooding and wetness. If possible, another site should be selected on better suited soils.

Interpretive Groups

Land capability subclass: 6w
Prime farmland status: No
Hydric soil status: Yes

WkA—Wickham sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Coastal Plain and Piedmont valleys
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Shape of areas: Long and irregular
Size of areas: 10 to 100 acres

Composition

Wickham and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown sandy loam

Subsoil:
10 to 20 inches—strong brown sandy clay loam
20 to 43 inches—yellowish red sandy clay loam
43 to 58 inches—yellowish red sandy loam that has red and light yellowish brown masses of oxidized iron
58 to 74 inches—strong brown and brownish yellow sandy loam that has yellowish red and red mottles

Substratum:
74 to 80 inches—brownish yellow sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: Rare, from March through May for brief durations

Surface runoff: Slow
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The poorly drained Kinston and Wehadkee soils in depressions
- The moderately well drained Altavista soils in the lower positions

Similar soils:
- Areas of soils that are similar to the Wickham soil but have a loamy sand surface layer

Land Use

Dominant uses: Hayland and cropland
Other uses: Pasture and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Flooding and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Flooding and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
- Areas within this map unit may need artificial drainage to maximize productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of

desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- Placing structures on the highest part of the landscape reduces the risk of damage from flooding.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- This map unit is severely limited for septic tank absorption fields because of flooding. The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Suited
Management concerns: Flooding
Management measures and considerations:
- Flooding makes this map unit difficult to manage for lawns and landscaping and severely limits use during periods of inundation.

Interpretive Groups

Land capability subclass: 1
Prime farmland status: Yes
Hydric soil status: No

WkB—Wickham sandy loam, 2 to 6 percent slopes, rarely flooded

Setting

Landscape: Coastal Plain and Piedmont valleys
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Shape of areas: Long and narrow
Size of areas: 10 to 50 acres

Composition

Wickham and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown sandy loam

Subsoil:
10 to 20 inches—strong brown sandy clay loam
20 to 43 inches—yellowish red sandy clay loam
43 to 58 inches—yellowish red sandy loam that has red and light yellowish brown masses of oxidized iron
58 to 74 inches—strong brown and brownish yellow sandy loam that has yellowish red and red mottles

Substratum:
74 to 80 inches—brownish yellow sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Surface runoff: Moderate
Content of organic matter in the surface layer: Low
Natural fertility: Low

Minor Components

Dissimilar soils:
- The moderately well drained Altavista soils in the lower positions

Similar soils:
- Areas of soils that have a browner subsoil than the Wickham soil and have a gravelly surface layer

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and corn
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and helps to maximize productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Common bermudagrass and coastal bermudagrass
Management concerns: Erodibility and soil fertility

Management measures and considerations:
- Preparing seedbeds on the contour or across the slope helps to control soil erosion and increases germination.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- Placing structures on the highest parts of the landscape reduces the risk of damage from flooding.

Septic tank absorption fields
Suitability: Suited
Management concerns: Flooding
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves septic system performance.

Local roads and streets
Suitability: Suited
Management concerns: Flooding
Management measures and considerations:
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Constructing roads on raised, well compacted fill material helps to overcome the wetness limitation of the soil.

Lawns and landscaping
Suitability: Suited

Management concerns: Flooding
Management measures and considerations:
- Flooding makes this map unit difficult to manage for lawns and landscaping and severely limits use during periods of inundation.

Interpretive Groups

Land capability subclass: 2e
Prime farmland status: Yes
Hydric soil status: No

WnD—Wynott-Winnsboro complex, 6 to 15 percent slopes, very stony

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Convex shoulders and smooth and convex side slopes
Shape of areas: Irregular
Size of areas: 50 to 200 acres

Composition

Wynott and similar soils: 60 percent
Winnsboro and similar soils: 20 percent
Dissimilar soils: 20 percent

Typical Profile

Wynott
Surface layer:
0 to 8 inches—brown gravelly sandy loam

Subsurface layer:
8 to 12 inches—light olive brown gravelly sandy loam

Subsoil:
12 to 32 inches—yellowish brown clay
32 to 38 inches—variegated yellowish brown, brownish yellow, white, and strong brown clay loam

Substratum:
38 to 80 inches—variegated grayish green and white highly weathered mafic rock

Winnsboro
Surface layer:
0 to 6 inches—brown very gravelly sandy loam

Subsurface layer:
6 to 12 inches—brown gravelly sandy clay loam

Subsoil:
12 to 32 inches—strong brown clay
32 to 40 inches—yellowish brown and light olive brown clay loam

Substratum:
40 to 56 inches—light olive brown sandy clay loam that has black manganese concretions
56 to 80 inches—olive weathered bedrock that crushes to a sandy loam

Soil Properties and Qualities

Depth class: Wynott—moderately deep; Winnsboro—deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Wynott—low; Winnsboro—high
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: High
Flooding: None
Rock fragments on the surface: About 0.1 to 3.0 percent of the surface is covered with cobbles and stones that are an average of 12 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Low
Depth to bedrock: Wynott—20 to 40 inches to soft bedrock; Winnsboro—40 to 60 inches to soft bedrock

Minor Components

Dissimilar soils:
- Enon soils, which are in the higher positions on ridges and are very deep to bedrock
- Wilkes soils, which are in positions similar to those of the major soils and are shallow to bedrock
- Non-stony soils in random areas throughout the landscape

Similar soils:
- A few small areas of soils that have a gravelly loam surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Poorly suited
Management concerns: Erodibility, equipment use, rooting depth, and soil fertility
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place reduces soil erosion, helps to control surface runoff, and enhances rainfall infiltration.
- Removing the larger stones and boulders and limiting equipment use to the larger open areas improve the suitability of these soils.
- Incorporating plant residue into the surface layer improves the water holding capacity of the soil and using shallow rooted crops helps to overcome the moderately deep rooting depth of the Wynott soil.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain pastures and increase productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Slope can limit equipment use in the steeper areas when hay is harvested.

- Removing larger stones or limiting equipment use to the larger open areas may be needed.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high
Management concerns: Equipment use, windthrow hazard, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Wynott soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Potential of the Winnsboro soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and equipment use
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wynott—shrink-swell and depth to bedrock; Winnsboro—shrink-swell
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wynott—restricted permeability; Winnsboro—restricted permeability and depth to bedrock

Management measures and considerations:
- The local health department can be contacted for additional guidance regarding sanitary facilities.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Poorly suited
Management concerns: Shrink-swell and low strength
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope and small and large stones
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 6s
Prime farmland status: No
Hydric soil status: No

WyE—Wynott-Wilkes complex, 15 to 45 percent slopes, very stony

Setting

Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Wynott—side slopes; Wilkes—shoulders and middle part of side slopes
Shape of areas: Irregular
Size of areas: 50 to 200 acres

Composition

Wynott and similar soils: 65 percent
Wilkes and similar soils: 20 percent
Dissimilar soils: 15 percent

Typical Profile

Wynott
Surface layer:
0 to 8 inches—brown gravelly sandy loam

Subsurface layer:
8 to 12 inches—light olive brown gravelly sandy loam

Subsoil:
12 to 32 inches—yellowish brown clay
32 to 38 inches—variegated yellowish brown, brownish yellow, white, and strong brown clay loam

Bedrock:
38 to 80 inches—variegated grayish green and white highly weathered mafic rock

Wilkes
Surface layer:
0 to 4 inches—dark grayish brown very gravelly sandy loam

Subsurface layer:
4 to 9 inches—olive gravelly sandy loam

Subsoil:
9 to 15 inches—yellowish brown clay

Bedrock:
15 to 80 inches—variegated, weathered mafic rock

Soil Properties and Qualities

Depth class: Wynott—moderately deep; Wilkes—shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Wynott—moderate; Wilkes—low
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Wynott—high; Wilkes—moderate
Flooding: None
Rock fragments on the surface: About 0.1 to 3.0 percent of the surface is covered with cobbles and stones that are an average of 12 inches across and are about 50 feet apart.
Content of organic matter in the surface layer: Low
Natural fertility: Medium
Depth to bedrock: Wynott—20 to 40 inches to soft bedrock; Wilkes—10 to 20 inches to soft bedrock

Minor Components

Dissimilar soils:
- Enon soils, which are in the higher positions on ridges and are very deep to bedrock
- Winnsboro soils, which are in the smoother position and are deep to bedrock
- Non-stony soils in random areas throughout the landscape

Similar soils:
- A few small areas that have a very gravelly surface layer

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: Steepness of slope and large stones

Management measures and considerations:
- This map unit is severely limited for crop production because of steepness of slope and large stones. If possible, another site should be selected on better suited soils.

Pasture and hayland
Suitability: Poorly suited to pasture; unsuited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility, equipment use, rooting depth, and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Steepness of slope limits equipment use in the steeper areas of this map unit.
- Using plant varieties that are adapted to droughty conditions increases productivity.
- The shallow rooting depth of the soil makes this map unit difficult to manage for the economical production of pasture and hay.
- Applying lime and fertilizer according to recommendations from soil tests increases the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pasture and hayland.

Woodland
Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Wynott—erodibility, equipment use, and competition from undesirable plants; Wilkes—windthrow hazard and competition from undesirable plants.
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome slope limitations.
- Planting appropriate species, as recommended by a forester, maximizes productivity and helps to ensure planting success.
- Using site preparation practices, such as prescribed burning and the application of herbicides, reduces competition from unwanted plants.

Wildlife habitat
Potential of the Wynott soil to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Potential of the Wilkes soil to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by establishing small food plots and leaving a buffer of undisturbed vegetation around the open areas.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, and promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited

Management concerns: Wynott—shrink-swell and steepness of slope; Wilkes—steepness of slope and depth to bedrock
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wynott—steepness of slope; Wilkes—restricted permeability, shrink-swell, and depth to bedrock
Management measures and considerations:
- The local health department can be contacted for additional guidance regarding sanitary facilities.
- Installing the distribution lines on the contour improves system performance.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope, low strength, and depth to bedrock
Management measures and considerations:
- Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope improve the strength of the soil.
- The soft bedrock underlying the soils in this map unit does not require special equipment for excavation, but it is difficult to revegetate or pack if used in fill slopes.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope, erodibility, and depth to bedrock
Management measures and considerations:
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep eroding soil on site.
- Soft bedrock will need to be crushed or removed if excavated material is used for landscaping.

Interpretive Groups

Land capability subclass: 7s
Prime farmland status: No
Hydric soil status: No

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The titles of the tables described in this section are:

- "Land Capability and Yields per Acre of Crops"
- "Land Capability and Yields per Acre of Pasture and Hay"

The average yields per acre shown in the yields tables in this survey are those that can be expected of the principal crops under a high level of management. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the tables.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the yields tables are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in the yields tables.

Prime Farmland

The table "Prime Farmland" lists the map units in the survey area that are considered prime farmland. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 63,122 acres in the survey area, or nearly 13 percent of the total acreage, meets the requirements for prime farmland. Scattered areas of this land are throughout the county, mainly in general soil map units 1,2,3,5,7,and 8, which are described under the heading "General Soil Map Units."

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

For some soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

Landscaping and Gardening

Kenneth M. Rogers, conservation agronomist (retired), Natural Resources Conservation Service, helped to prepare this section.

The soils in residential areas are used primarily as sites for homes, driveways, and streets. Remaining areas of each lot are commonly used for lawns, which enhance the appearance of the homes; as gardens for vegetables or flowers and shrubs; as orchards for fruits and nuts; for recreational uses; as habitat for animals and birds; for trees, which provide shade and promote energy conservation; for vegetation and structures designed to abate noise, enhance privacy, and provide protection from the wind; and for septic tank absorption fields. Because the outdoor areas are used for

several purposes, careful planning and a good understanding of the soils are important.

This section contains general soil-related information for landscaping and gardening. Other information may be obtained from the local office of the Cooperative Extension System, the Natural Resources Conservation Service, or private businesses that provide landscaping and related services. The amount of soil information needed for use in some areas is beyond the scope of this soil survey and requires more detail than that provided at the map scale used. Onsite investigation is needed in these areas.

Most of the soils in the residential areas in Tallapoosa County have been disturbed to some degree during construction of houses, streets, driveways, and utility service. The construction involved cutting and filling, grading, and excavating. As a result, soil properties are more variable and less predictable than in undisturbed areas. Onsite examination is necessary in planning land uses in disturbed areas.

Soils that have had the surface layer removed during grading and that are clayey or have dense layers in the subsoil are some of the poorest soils for plant growth. Tallapoosa, Louisa, and Uchee soils are among the most poorly suited to plant growth. The surface layer of these soils was removed during grading, which exposed a dense, firm subsoil that restricts root penetration, absorbs little rainfall, and causes excessive runoff. Incorporating organic matter into the soil improves tilth, increases the rate of water infiltration, and provides a more desirable rooting medium. Areas that are subject to intensive foot traffic should be covered with gravel or a mulch, such as pine bark or wood chips.

Some soils, such as Wehadkee, Kinston, and other soils, are wet. The wetness limits the selection of plants to those that are tolerant of a high moisture content in the soil. Several methods can be used to minimize the effects of the wetness. In the more permeable soils, wetness can be reduced by underground tile drains, which lower the water table.

Some soils, such as Chewacla, Iuka, and Toccoa soils, are on flood plains. Most plants used for gardening and landscaping can be grown on these soils, but consideration should be given to the effects of floodwater. Surface drainage is a management concern because urban uses commonly result in increased rates of surface runoff, which increase the frequency and severity of flooding. Advice and assistance regarding drainage problems can be obtained from the Natural Resources Conservation Service, municipal and county engineering departments, and private engineering companies.

A limited depth to bedrock and rock fragments in the soil limit the kinds of plants that can be grown. Cutting and filing sometimes expose the bedrock and restrict the root zone. In areas of Tallapoosa soils, which are naturally shallow over bedrock, removal of any soil material decreases the depth of the root zone.

Some soils, such as Louisburg and Wilkes soils, have many rock fragments on the surface. The content of these fragments may increase as the depth increases. As the content of rock fragments increases, root growth is restricted and the available water capacity is reduced. In many disturbed areas, broken concrete, brick, and other debris are buried under soil material. In these areas, the soil generally is too shallow or has properties that are too poor to support many plants. Applications of topsoil generally are needed to provide an adequate rooting medium for plants, especially in areas used for landscape and gardening.

Natural fertility is low in most soils in Tallapoosa County. Most of the soils are strongly acid or very strongly acid. The original surface layer contains the best nutrients and has the most favorable pH level for most plants. In many areas, the fertility of the soil can be improved by applications of lime and fertilizer. If the surface layer is removed during construction, the remaining soil is very acid and extremely low in available plant nutrients. Also, many nutrients are unavailable for plant growth in acid

soil conditions. Disturbed soils generally need much larger amounts of lime and fertilizer, which should be applied according to the results of soil tests and the type of plants grown. Information on sampling for soil testing can be obtained from the Cooperative Extension System, the Natural Resources Conservation Service, and local nurseries.

In the following paragraphs, some of the plants that are used in landscaping and gardening and some management relationships between the plants and the soils are described. Information in this section should be supplemented by consultations with specialists at the Cooperative Extension System, the Natural Resources Conservation Service, or private landscaping and gardening businesses.

The grasses used for landscaping in Tallapoosa County are mainly vegetatively propagated species, such as zoysiagrass, hybrid bermudagrass, and centipede grass, and seeded species, such as fescue, common bermudagrass, and centipede grass. The grasses commonly used for short-term cover include ryegrass, rye, wheat, sudangrass, and millet.

The vegetatively propagated plants are usually planted as sprigs, plugs, or sod. Additions of top soil may be needed before planting in some areas. Also, lime and fertilizer should be applied and incorporated into the soil. The plants should be placed in close contact with the soil, and the plantings should be watered to ensure the establishment of the root system. Centipede grass and certain strains of zoysiagrass are moderately shade tolerant; however, zoysiagrass normally requires more maintenance than centipede grass. The strains of hybrid bermudagrass are fast growing, but they are not as tolerant of shade as centipede grass or zoysiagrass.

Common perennial grasses that are established by seeding include fine leaf fescue for cool season lawns and common bermudagrass or centipede grass for warm season lawns. Lime and fertilizer should be applied and incorporated into the soil before seeding. Proper planting depth is important when grasses are established from seed.

Short-term vegetative cover is used to protect the soil at construction sites or to provide cover between the planting seasons of the desired grass species. The most commonly used grasses for short-term cover are ryegrass for cool seasons and sudangrass or millet for warm seasons. These species are annuals and die after the growing season. Periodic applications of lime and fertilizer are needed on all types of grasses. The kinds and amounts of lime and fertilizer to apply should be based on the results of soil tests.

Vines can be used to provide vegetative cover in moderately shaded areas and in steep areas that cannot be mowed. Ground ivy and periwinkle can be used for ground cover in these areas and in areas of rock outcrop or on walls and fences. All of these plants are propagated vegetatively, usually from potted plants or sprigs.

Mulches can be used for ground cover in areas where traffic is too heavy for grass cover, in areas where shrubs and flowers are used and additional ground cover is desired, and in densely shaded areas. Mulches provide effective ground cover. They also provide immediate cover for erosion control in areas where live vegetation is not desired. Effective mulches include pine straw, small-grain straw, hay, composted grass clippings, wood chips, pine bark, gravel, and several manufactured materials. The type of mulch to use depends to some extent on the hazard of erosion. Mulches also can be used to conserve soil moisture and to control weeds around trees, shrubs, and flowers.

Shrubs are used primarily to enhance the appearance of homesites. They also can be used to control traffic. They can be effective in dissipating the energy from raindrops and from runoff from roofs. Most native and adapted species add variety to residential settings. The effects of acidity and fertility levels vary greatly between shrub types.

Vegetable and flower gardens are important to many individuals and businesses. However, the soils in areas where homes and businesses are established may not be suited to vegetables and flowers. Soils that have been disturbed by construction may not be productive unless topsoil is applied. Soils that have a slope of more than 8 percent have poor potential for vegetable gardening because of the hazard of erosion if the soils are tilled. Generally, steeper soils have a thinner surface layer. Flower gardening is possible in steeper areas, however, if mulches are used to help control erosion. Incorporating composted tree leaves and grass clippings into the soil improves fertility, tilth, and moisture content. Additional information regarding vegetable crops is included under the heading “Crops and Pasture.”

Most garden plants grow best in soils that have a pH level between 5.5 and 6.5 and that have a high fertility level. Applying too much fertilizer or using fertilizers with the wrong combination of plant nutrients can be avoided by soil testing, which is the only effective method of determining the amount and kind of fertilizer that should be applied. Information regarding soil testing can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service or from a retail fertilizer business.

Trees are important in the landscaping of homesites. Information regarding the relationships between soils and trees is available in the section “Forestland Productivity and Management.” Special assistance regarding urban forestry can be obtained from the Alabama Forestry Commission.

Forestland Productivity and Management

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

In the table, “Forestland Productivity,” the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

The titles of the tables described in this section are:

- “Forestland Management, Part I”
- “Forestland Management, Part II”

In these tables, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited,

moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreational Development

The titles of the tables described in this section are:

- "Camp Areas, Picnic Areas, and Playgrounds"
- "Paths, Trails, and Golf Fairways"

In the tables described in this section, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways (fig. 8) are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Figure 8.—A golf fairway in an area of Pacolet-Rion complex, 6 to 15 percent slopes, moderately eroded, stony. The soils of this map unit are somewhat limited to golf fairways because of the steepness of the slope.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In the table described in this section, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of

habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Hydric Soils

The table described in this section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2006) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or

B. are poorly drained or very poorly drained and have either:
   1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
   2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
   3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.

3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

The titles of the tables described in this section are:

- "Dwellings and Small Commercial Buildings"
- "Roads and Streets, Shallow Excavations, and Lawns and Landscaping"

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. The tables described in this section show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount

of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

The titles of the tables described in this section are:

- “Sewage Disposal”
- “Landfills”

These tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when

wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

The titles of the tables described in this section are:

- “Source of Gravel and Sand”
- “Source of Reclamation Material, Roadfill, and Topsoil”

These tables give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table “Source of Sand and Gravel,” only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are

gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In the table "Source of Reclamation Material, Roadfill, and Topsoil," the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

The table "Ponds and Embankments" gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Soil Properties

The table described in this section gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

The table described in this section shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in

micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion.

There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Soil Properties

The table described in this section shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Water Features

The table described in this section gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is

assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

The table described in this section gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root

environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2006). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udults (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludults.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, thermic Typic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

The table "Taxonomic Classification of the Soils" indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2006). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Agricola Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Basic crystalline rock
Landscape: Piedmont uplands
Landform: Hillslopes
Landform position: Crests and side slopes
Slope: 15 to 25 percent
Taxonomic class: Fine, kaolinitic, thermic Rhodic Kanhapludults

Commonly Associated Soils

- Gwinnett soils, which are in similar positions or are on the more level part of the slope than the Agricola soils and are deep to bedrock
- Lloyd soils, which are on the more level part of the slope than the Agricola soils and are very deep to bedrock
- Pacolet soils, which are in positions similar to those of the Agricola soils and are very deep to bedrock

Typical Pedon

Agricola gravelly loam, in an area of Gwinnett-Agricola complex, 15 to 25 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 1.1 miles southeast of Pleasant Valley Church; 625 feet north and 2,250 feet east of the southwest corner of section 33, T. 20 N., R. 23 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 40 minutes 09 seconds N. and long. 85 degrees 45 minutes 29 seconds W.

Ap—0 to 3 inches; dark reddish brown (5YR 3/4) gravelly loam; weak fine granular structure; very friable; many fine and medium roots; 25 percent angular gravel; many fine pores; slightly acid; gradual wavy boundary.

BA—3 to 6 inches; reddish brown (5YR 4/4) gravelly loam; moderate medium granular structure; friable; many fine and medium roots; 20 percent angular gravel; 2 percent cobbles; strongly acid; clear wavy boundary.

Bt1—6 to 13 inches; dark red (2.5YR 3/6) clay loam; weak fine subangular blocky structure; firm; common fine and medium roots; 10 percent angular gravel; 2 percent cobbles; few distinct clay films on faces of peds; moderately acid; clear wavy boundary.

Bt2—13 to 24 inches; dark red (2.5YR 3/6) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; common distinct clay films on faces of peds; few fine flakes of mica; moderately acid; clear wavy boundary.

Bt3—24 to 35 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; few fine flakes of mica; moderately acid; clear irregular boundary

Cr—35 to 80 inches; highly weathered, tilted, fractured amphibolite; platy rock structure; digs out easily.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Content and size of rock fragments: 0 to 25 percent; mostly angular gravel
Reaction: Very strongly acid to slightly acid throughout

Ap or A horizon:
Color—hue of 10R to 5YR, value of 3, and chroma of 3 to 6
Texture—sandy loam or loam

BA horizon (where present):
Color—hue of 10R or 2.5YR, value of 3 or 4, and chroma of 2 to 4
Texture—sandy loam, loam, sandy clay loam, or clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 3, and chroma of 4 or 6
Texture—sandy clay, sandy clay loam, clay loam, or clay

BC horizon (where present):
Color—variegated in shades of yellow, brown, and red
Texture—loam, sandy clay loam, or clay loam

Cr layer:
Type of bedrock—basic crystalline soft bedrock that can be dug with difficulty with hand tools

Altavista Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvial sediments
Landscape: Piedmont uplands
Landform: Stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 6 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

- The somewhat poorly drained Cartecay and Chewacla soils in the lower flood plain positions
- The well drained Toccoa soils, which are in the higher levee positions and are sandy

Typical Pedon

Altavista sandy loam, 2 to 6 percent slopes; in Coosa County, Alabama, about 2.5 miles east of Goodwater; 2,400 feet north and 600 feet west of the southeast corner of section 24, T. 24 N., R. 20 E.; USGS Goodwater topographic quadrangle; lat. 33 degrees 03 minutes 10 seconds N. and long. 86 degrees 00 minute 37 seconds W.

Oe—0 to 2 inches; partially decomposed forest litter.
Ap—2 to 7 inches; yellowish brown (10YR 5/4) sandy loam; weak fine granular structure; very friable; common fine and medium roots; moderately acid; clear wavy boundary.
Bt1—7 to 11 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; moderately acid; clear wavy boundary.

Bt2—11 to 27 inches; olive yellow (2.5Y 6/6) clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; common faint clay films on faces of peds; common distinct yellowish brown (10YR 5/6, 5/8) masses of oxidized iron; light yellowish brown (2.5Y 6/4) iron depletions; strongly acid; gradual wavy boundary.

Bt3—27 to 40 inches; olive yellow (2.5Y 6/6) clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; yellowish brown (10YR 5/6) and brownish yellow (10YR 6/8) masses of oxidized iron; light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

BC—40 to 52 inches; olive yellow (2.5Y 6/6) sandy clay loam; weak fine subangular blocky structure; friable; common distinct light gray (2.5Y 7/2) iron depletions; very strongly acid; clear wavy boundary

C—52 to 80 inches; light gray (2.5Y 7/2) stratified sandy loam and sandy clay loam; massive; friable; common distinct olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches
Depth to contrasting soil material: More than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 15 percent; mostly gravel
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture—sandy loam or fine sandy loam

BE horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam, loam, or sandy clay loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of yellow, brown, and red and iron depletions in shades of yellow, brown, and gray

C horizon:
Color—variegated in shades of yellow, red, brown, and gray
Texture—variable; commonly stratified sandy loam to sandy clay

Badin Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Phyllite and sericite schist
Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Summits and shoulders
Slope: 2 to 10 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- The fine-loamy Fruithurst soils, which are in positions similar to those of the Badin soils and are moderately deep
- Tallapoosa soils, which are in the higher positions on shoulders and are shallow to bedrock

Typical Pedon

Badin loam, in an area of Badin-Tatum-Tallapoosa complex, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 0.9 mile northeast of Goldville; 1,600 feet north and 200 feet east of the southwest corner of section 5, T. 24 N., R. 23 E.; USGS New Site topographic quadrangle; lat. 33 degrees 05 minutes 39 seconds N. and long. 85 degrees 46 minutes 36 seconds W.

Ap—0 to 5 inches; reddish brown (5YR 4/4) loam; moderate medium granular structure; friable; many fine, medium, and coarse roots; strongly acid; clear wavy boundary.

Bt1—5 to 14 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; common fine and medium roots; common clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—14 to 20 inches; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; friable; common fine and medium roots; common medium distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt/C—20 to 28 inches; red (2.5YR 4/8) clay loam (Bt part of the horizon); weak coarse subangular blocky structure; friable; few fine roots; common very fine flakes of mica; discontinuous, diagonally oriented strata of weathered phyllite that crushes to loam (C part of the horizon); firm; very strongly acid; clear irregular boundary.

Cr—28 to 80 inches; red (2.5YR 4/8) highly weathered phyllite; platy rock structure, tilted diagonally; rippable and can be dug with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Content of rock fragments: 0 to 15 percent in the solum
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 3 to 8
Texture—loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 3 to 8
Texture—loam or silt loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—silty clay, silty clay loam, clay loam, or clay

C horizon (where present):
Color—variegated in shades of yellow, brown, and red
Texture—silty clay loam or silt loam

Cr layer:
Type of bedrock—weathered sericite schist or phyllite that can be dug with difficulty with hand tools

Buncombe Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Rapid
Parent material: Sandy alluvium
Landscape: Upper Coastal Plain and Piedmont
Landform: Flood plains and natural levees
Landform position: Linear to slightly convex slopes
Slope: 0 to 4 percent
Taxonomic class: Mixed, thermic Typic Udipsamments

Commonly Associated Soils

- The somewhat poorly drained Chewacla and Cartecay soils in the lower positions and on the more level parts of the slope
- The fine-loamy Toccoa soils, which are in positions similar to those of the Buncombe soils
- The fine-loamy Wehadkee soils, which are in the lower, broader positions and are poorly drained

Typical Pedon

Buncombe loamy fine sand, 0 to 4 percent slopes; in Tallapoosa County, Alabama, about 1.4 miles northwest of Buttston; 950 feet north and 525 feet west of the southeast corner of section 21, T. 23 N., R. 24 E.; USGS Buttston topographic quadrangle; lat. 32 degrees 57 minutes 58 seconds N. and long. 85 degrees 38 minutes 54 seconds W.

A—0 to 9 inches; dark yellowish brown (10YR 4/4) loamy fine sand; weak fine granular structure; very friable; common coarse, fine, and medium roots; common fine flakes of mica; moderately acid; clear wavy boundary.
C1—9 to 17 inches; strong brown (7.5YR 5/6) loamy sand; single grain; loose; common fine and very fine roots; thin streaks of brown (7.5YR 4/4) material; many fine flakes of mica; strongly acid; gradual wavy boundary.
C2—17 to 33 inches; strong brown (7.5YR 5/6) loamy sand; single grain; loose; many fine flakes of mica; very strongly acid; gradual wavy boundary.
C3—33 to 53 inches; dark brown (7.5YR 3/4) sand; single grain; loose; many fine flakes of mica; very strongly acid; gradual wavy boundary.
C4—53 to 80 inches; strong brown (7.5YR 5/8) loamy sand; massive; very friable; common medium faint strong brown (7.5YR 4/6) masses of oxidized iron; many fine flakes of mica; strongly acid.

Range in Characteristics

Depth to contrasting soil material: More than 60 inches
Depth to bedrock: 60 to more than 72 inches
Content of mica flakes: Few to many throughout the profile
Content of rock fragments: Less than 15 percent
Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, fine sandy loam, sandy loam, loam, or silt loam

Bw horizon (where present):
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 4 to 8
Texture—loamy sand, fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam or stratified with these textures
Redoximorphic features (where present)—masses of oxidized iron in shades of brown
Mottles (where present)—shades of brown and gray (chroma 2 allowed below 40 inches; not due to wetness)

Cartecay Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid
Parent material: Loamy alluvium
Landscape: Piedmont
Landform: Flood plain
Landform position: Linear to slightly concave slopes
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, mixed, semiactive, nonacid, thermic Aquic Udifluvents

Commonly Associated Soils

- The somewhat poorly drained Chewacla soils in the lower positions and on the more level parts of the slope
- The fine-loamy Toccoa soils, which are in positions similar to those of the Cartecay soils
- The poorly drained Wehadkee soils in the lower positions

Typical Pedon

Cartecay loam, in an area of Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded; in Tallapoosa County, Alabama, about 3.7 miles southwest of Walnut Hill; 500 feet south and 1,300 feet west of the northeast corner of section 2, T. 19 N., R. 22 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 39 minutes 54 seconds N. and long. 85 degrees 49 minutes 15 seconds W.

Ap—0 to 3 inches; dark brown (7.5YR 3/4) loam; moderate medium granular structure; very friable; many fine, medium, and coarse roots; few fine and very fine flakes of mica; strongly acid; clear smooth boundary.
C1—3 to 13 inches; brown (7.5YR 4/4) fine sandy loam; massive; very friable; many fine, medium, and coarse roots; few fine and very fine flakes of mica; strongly acid; clear wavy boundary.
C2—13 to 18 inches; strong brown (7.5YR 4/6) fine sandy loam; massive; very friable; common fine and medium roots; faint pressure faces; common medium faint dark brown (7.5YR 3/3) stains; few fine and very fine flakes of mica; thin strata of loamy sand; strongly acid; clear wavy boundary.
C3—18 to 32 inches; brown (7.5YR 4/3) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron; common medium distinct grayish brown (10YR 5/2) iron depletions; common fine soft black masses; common fine and very fine flakes of mica; strongly acid; clear wavy boundary.
Cg1—32 to 47 inches; grayish brown (10YR 5/2) gravelly fine sandy loam; massive; friable; many medium distinct dark yellowish brown (10YR 4/4) and common medium distinct yellowish brown (10YR 5.6) masses of oxidized iron; common fine

soft black masses; common fine and very fine flakes of mica; 25 percent rounded gravel; strongly acid; clear wavy boundary.

Cg2—47 to 80 inches; grayish brown (2.5Y 5/2) fine sandy loam; massive; friable; common fine and very fine flakes of mica; strongly acid.

Range in Characteristics

Depth to contrasting soil material: More than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 10 percent; mostly rounded gravel
Content of mica flakes: Few to many throughout the profile
Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

C horizon:
Color—hue of 5YR to 10YR, value of 4 to 8, and chroma of 3 to 6; or variegated in shades of yellow, brown, red, and gray
Texture—coarse sandy loam, sandy loam, fine sandy loam, loam, silt loam, or loamy sand with thin strata of coarser or finer material
Redoximorphic features—masses of oxidized iron in shades of brown and red and iron depletions in shades of brown and gray (iron depletions within 20 inches of the soil surface)

Cg horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 1 or 2; or variegated in shades of red, brown, and gray
Texture—fine sandy loam, sandy clay loam, loam, silt loam, sand, or loamy sand
Redoximorphic features—masses of oxidized iron in shades of brown and red

Cecil Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 10 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults (fig. 9)

Commonly Associated Soils

- The moderately well drained Hard Labor soils in the lower positions on toe slopes
- Pacolet soils, which are in the lower positions on shoulders or side slopes and have a thinner solum than the Cecil soils
- The fine-loamy Rion soils, which are in the lower positions on side slopes

Typical Pedon

Cecil sandy loam, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 2.7 miles northwest of Hackneyville; 350 feet south and 1,700 feet west of the northeast corner of section 9, T. 24 N., R. 21 E.; USGS Hackneyville

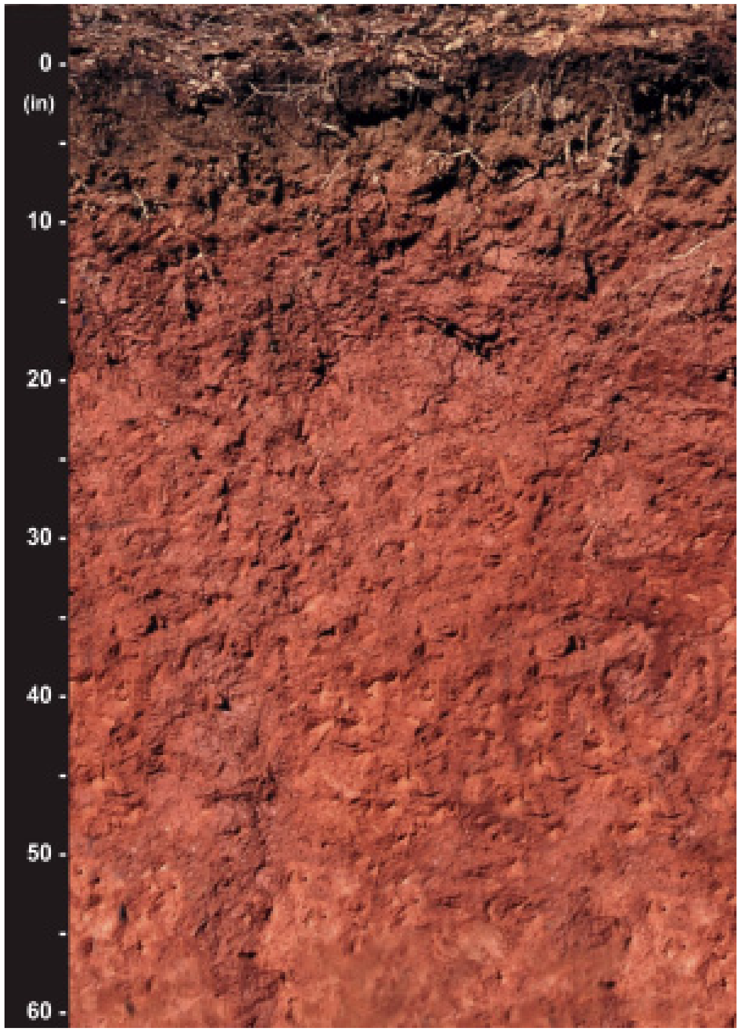

Figure 9.—A profile of a Cecil soil. Cecil soils formed in residuum weathered from felsic crystalline rock. These very deep, well drained soils have a clayey subsoil.

topographic quadrangle; lat. 33 degrees, 05 minutes, 21 seconds N and long. 85 degrees 57 minutes 45 seconds W.

Ap—0 to 4 inches; brown (7.5YR 4/4) sandy loam; weak fine granular structure; very friable; common fine, medium, and coarse roots; about 5 percent gravel; strongly acid; clear smooth boundary.

Bt1—4 to 12 inches; red (2.5YR 5/6) clay loam; weak medium subangular blocky structure; firm; common fine and medium roots; common faint red (2.5YR 4/6) clay films on faces of peds; strongly acid; gradual smooth boundary.

Bt2—12 to 27 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; few fine and medium roots; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—27 to 39 inches; red (2.5YR 4/6) clay; common medium distinct strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt4—39 to 50 inches; red (2.5YR 4/8) clay loam; common medium distinct strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

BC—50 to 64 inches; red (2.5YR 4/6) clay loam; common medium distinct strong brown (7.5YR 5/6) mottles; weak coarse subangular blocky structure; friable; common fine flakes of feldspar; very strongly acid; gradual wavy boundary.

C—64 to 80 inches; variegated sandy loam saprolite weathered from diorite gneiss; massive; friable; common fine flakes of feldspar; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 10 percent
Reaction: Very strongly acid to moderately acid in the A horizon; very strongly acid or strongly acid in the B and C horizons, except where lime has been applied

Ap or A horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 8
Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay loam, clay loam, or loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma 6 or 8
Texture—sandy clay, clay loam, or clay
Mottles—shades of red, yellow, and brown

BC horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam, clay loam, or loam
Mottles—shades of yellow and brown

C horizon:
Color—variegated in shades of red, brown, and yellow
Texture—loamy saprolite from highly weathered gneiss or schist

Chewacla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy alluvium
Landscape: Piedmont
Landform: Flood plains
Landform position: Nearly level, linear to slightly convex slopes
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts

Commonly Associated Soils

- The somewhat poorly drained Cartecay soils in the more level, lower positions
- The fine-loamy Toccoa soils, which are in positions similar to those of the Chewacla soils
- The poorly drained Wehadkee soils in the lower positions

Typical Pedon

Chewacla silty clay loam, in an area of Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded; in Tallapoosa County, Alabama, about 1.3 miles southeast of Zana on Emuckfaw Creek; 800 feet south and 700 feet east of the northwest corner of section 6, T. 23 N., R. 24 E.; USGS Daviston topographic quadrangle; lat. 33. degrees 00 minute 58 seconds N. and long. 85 degrees 41 minutes 42 seconds W.

Ap1—0 to 2 inches; dark grayish brown (10YR 4/2) silty clay loam; weak medium granular structure; friable; many fine and medium roots; common fine flakes of mica; many fine distinct strong brown (7.5YR 5/6) irregular shaped masses of oxidized iron throughout; strongly acid; clear smooth boundary.

Ap2—2 to 6 inches; grayish brown (10YR 5/2) silty clay loam; weak medium subangular blocky structure parting to moderate medium granular; friable; many fine and very fine roots; common fine flakes of mica; few fine soft black masses; many fine distinct strong brown (7.5YR 5/6) and few fine prominent yellowish red (5YR 4/6) irregular shaped masses of oxidized iron throughout; strongly acid; clear smooth boundary.

Bw1—6 to 12 inches; yellowish red (5YR 4/6) silty clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine flakes of mica; few fine soft black masses; common medium distinct grayish brown (2.5Y 5/2) irregular shaped iron depletions throughout; strongly acid; gradual wavy boundary.

Bw2—12 to 20 inches; reddish brown (5YR 4/4) silty clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine flakes of mica; many fine distinct grayish brown (2.5Y 5/2) irregular shaped iron depletions throughout; very strongly acid; clear wavy boundary.

Ab—20 to 27 inches; brown (10YR 4/3) loam; weak fine medium subangular blocky structure; friable; common fine and very fine roots; common fine flakes of mica; common fine soft black masses; many medium distinct gray (10YR 5/1) irregular shaped iron depletions throughout; strongly acid; clear wavy boundary.

Bw3—27 to 38 inches; yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; few very fine roots; common fine flakes of mica; common fine distinct light gray (10YR 6/1) irregular shaped iron depletions throughout; strongly acid; gradual wavy boundary.

Bw4—38 to 53 inches; yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; many fine flakes of mica; common fine and medium distinct strong brown (7.5YR 4/6) irregular shaped masses of oxidized iron throughout; moderately acid; clear wavy boundary.

C—53 to 80 inches; light olive brown (2.5Y 5/4) silt loam; massive; friable; many fine flakes of mica; many fine distinct yellowish brown (10YR 5/6) and common fine and medium distinct strong brown (7.5YR 5/6) irregular shaped masses of oxidized iron throughout; common fine distinct light gray (10YR 6/1) irregular shaped iron depletions throughout; moderately acid.

Range in Characteristics

Thickness of the solum: 20 to more than 60 inches
Depth to contrasting soil material: More than 60 inches

Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 10 percent; mostly gravel
Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 1 to 4
Texture—silt loam or silty clay loam

Ab horizon (where present):
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1or 2
Texture—sandy loam, fine sandy loam, loam, silt loam, or clay loam

Bw horizon:
Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—loam, sandy clay loam, silt loam, or silty clay loam
Redoximorphic features— masses of oxidized iron in shades of brown and red and iron depletions in shades of brown and gray

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 4
Texture—variable below 40 inches; ranging from sandy loam to clay

Cg horizon (where present):
Color—hue of 10YR, value of 4 or 5, and chroma of 0 to 2
Texture—variable; commonly sandy loam to clay with strata of finer or coarser textured material

Cowarts Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in solum and moderately slow or slow in substratum
Parent material: Marine sediments
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 25 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Marvyn soils, which have a deeper solum and are in positions similar to those of the Cowarts soils or are on the more level parts of the slope
- Springhill soils, which are on the more level parts of the slope and have a deeper and redder solum than the Cowarts soils
- The arenic Uchee soils, which are in positions similar to those of the Cowarts soils

Typical Pedon

Cowarts gravelly sandy loam, 8 to 15 percent slopes; in Tallapoosa County, Alabama, about 0.75 mile southwest of The Barroom; 500 feet south and 190 feet east of the northwest corner of section 34, T. 18 N., R. 22 E.; USGS Carrville topographic quadrangle; lat. 32. degrees 30 minutes 15 seconds N. and long. 85 degrees 50 minutes 30 seconds W.

Ap—0 to 3 inches; brown (10YR 5/3) gravelly sandy loam; weak fine granular structure; very friable; many medium and coarse roots; about 15 percent gravel; strongly acid; clear wavy boundary.

BE—3 to 9 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; common fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.

Bt1—9 to 24 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine, medium, and coarse roots; few faint clay films on faces of peds; few fine faint strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bt2—24 to 37 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; slightly brittle; common fine and medium roots; common faint clay films on faces of peds; common faint strong brown (7.5YR 5/6) and common distinct red (2.5YR 4/6) masses of oxidized iron; common distinct pale brown (10YR 6/3) iron depletions; very strongly acid; clear wavy boundary.

C1—37 to 70 inches; variegated yellowish brown (10YR 5/8), light gray (10YR 7/1), and red (10R 4/6) sandy clay loam that has thin strata of sandy loam; pockets of weak coarse subangular blocky structure; firm; very strongly acid; gradual wavy boundary.

C2—70 to 80 inches; variegated dusky red (10R 3/3), strong brown (10YR 5/8), and white (2.5 8/0) clay; massive; firm; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to contrasting soil material: 70 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 15 to 20 percent
Content of plinthite: Less than 5 percent
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 4
Texture—sandy loam, loamy sand, or gravelly analogues of these textures

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, clay loam, or sandy clay
Redoximorphic features (where present)—masses of oxidized iron in shades of brown and red and iron depletions in shades of yellow and brown

C horizon:
Color—variegated in shades of yellow, red, brown, and gray
Texture—variable; commonly sandy loam to clay with strata of finer or coarser textured material

Enon Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Mafic crystalline rock
Landscape: Piedmont
Landform: Ridges
Landform position: Linear summits and side slopes

Slope: 2 to 6 percent
Taxonomic class: Fine, mixed, active, thermic Ultic Hapludalfs

Commonly Associated Soils

- Mecklenburg soils, which are in the higher positions and have a red subsoil
- Wilkes soils, which are in the higher positions on shoulders and are shallow to bedrock
- Winnsboro soils, which are in the higher positions on shoulders and are deep to bedrock
- Wynott soils, which are on the lower, narrow ridges and are moderately deep to bedrock

Typical Pedon

Enon very gravelly sandy loam, in an area of Enon-Wynott complex, 2 to 6 percent slopes; in Tallapoosa County, Alabama, about 0.9 mile northeast of Barnesville; 1,500 feet north and 1,600 feet west of the southeast corner of section 13, T. 20 N., R. 22 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 42 minutes 54 seconds N. and long. 85 degrees 48 minutes 19 seconds W.

A—0 to 4 inches; dark brown (10YR 3/3) very gravelly sandy loam; weak fine granular structure; very friable; common fine, medium, and coarse roots; 45 percent angular gravel; 5 percent cobbles; slightly acid; clear wavy boundary.

BE—4 to 12 inches; light olive brown (2.5Y 5/4) gravelly sandy clay loam; moderate medium granular structure; very friable; common fine and medium roots; 30 percent angular gravel; 5 percent cobbles; slightly acid; clear wavy boundary.

Bt1—12 to 25 inches; brownish yellow (10YR 6/8) clay; moderate medium subangular blocky structure; firm; common fine and medium and few coarse roots; common clay films on faces of peds; many fine black concretions; slightly acid; gradual wavy boundary.

Bt2—25 to 50 inches; brownish yellow (10YR 6/8) clay; strong medium subangular blocky structure; firm; common fine and medium and few coarse roots; common clay films on faces of peds; many fine and medium black concretions; slightly acid; gradual wavy boundary.

C—50 to 80 inches; yellow (10YR 7/8) loam saprolite; massive; friable; slightly acid.

Range in Characteristics

Thickness of the solum: 20 to 50 inches
Depth to bedrock: Greater than 60 inches
Content and size of rock fragments: 0 to 50 percent in the A, E, and BE horizons and 0 to 35 percent in the B horizon; mostly gravel or cobbles
Reaction: Strongly acid to neutral throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, or loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 6
Texture—fine sandy loam, sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8
Texture—loam, clay loam, or sandy clay loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—clay or clay loam

BC horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam, clay loam, or loam

C horizon:
Color—variegated in shades of brown, yellow, black, and white
Texture—variable; sandy loam, loam, or silt loam

Eunola Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Marine sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

- The well drained Cowarts soils in the higher positions on side slopes
- The poorly drained Kinston soils in the lower positions on flood plains
- The well drained Marvyn soils in the higher positions on ridges

Typical Pedon

Eunola sandy loam, 0 to 2 percent slopes; in Tallapoosa County, Alabama, about 1.6 miles south of Bucksville; 300 feet north and 2,000 feet west of the southeast corner of section 33, T. 17 N., R. 22 E.; USGS La Place topographic quadrangle; lat. 32 degree 29 minutes 42 seconds N. and long. 85 degrees 51 minutes 17 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) sandy loam; weak medium granular structure; friable; common fine and medium roots; slightly acid; abrupt smooth boundary.

Bt1—8 to 20 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; few strong brown (7.5YR 5/6) masses of oxidized iron; moderately acid; clear smooth boundary.

Bt2—20 to 40 inches; yellowish brown (10YR 5/4) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common medium distinct olive yellow (2.5Y 6/6) and red (2.5YR 4/6) masses of oxidized iron; light grayish brown (2.5Y 6/2) iron depletions; strongly acid; clear wavy boundary.

C1—40 to 54 inches; variegated strong brown (7.5YR 5/6), brownish yellow (10YR 6/6), and red (2.5YR 4/6) stratified sandy loam, sandy clay loam, and clay; massive; friable; very strongly acid; clear wavy boundary.

C2—54 to 80 inches; red (2.5YR 4/6) stratified sandy loam, sandy clay loam, and clay; massive; friable; common medium distinct strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) masses of oxidized iron; light gray (10YR 7/1) iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to contrasting soil material: More than 60 inches
Depth to bedrock: More than 60 inches

Content of rock fragments: 0 to 10 percent
Content of plinthite: Less than 5 percent
Reaction: Very strongly acid to slightly acid in the A horizon; very strongly acid or strongly acid in the B and C horizons

Ap or A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3
Texture—sandy loam or fine sandy loam

BE horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features—iron depletions in shades of brown and gray occur within 20 inches of the top of the argillic horizon and masses of oxidized iron in shades of yellow, brown, and red

C horizon:
Color—variegated in shades of yellow, red, brown, and gray
Texture—variable; commonly stratified sandy loam to clay

Fruithurst Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Phyllite and sericite schist
Landscape: Piedmont
Landform: Narrow ridges and hillslopes
Landform position: Ridgetops and side slopes
Slope: 2 to 40 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- The fine Badin soils, which are in positions similar to those of the Fruithurst soils and are moderately deep
- Tallapoosa soils, which are in the higher positions on shoulders and are shallow to bedrock

Typical Pedon

Fruithurst gravelly loam, in an area of Tallapoosa-Fruithurst complex, 3 to 10 percent slopes; in Tallapoosa County, Alabama, about 6.1 miles southwest of Dadeville; 950 feet south and 1,150 feet east of the northwest corner of section 27, T. 21 N., R. 22 E.; USGS Dadeville topographic quadrangle; lat. 32 degrees 46 minutes 49 seconds N. and long. 85 degrees 50 minutes 41 seconds W.

Ap—0 to 3 inches; yellowish brown (10YR 5/4) gravelly loam; weak fine granular structure; friable; many fine, medium, and coarse roots; 20 percent angular gravel; strongly acid; clear wavy boundary.
BE—3 to 7 inches; light brown (7.5YR 6/4) loam; moderate medium granular structure; friable; common fine and medium roots; 10 percent angular gravel; strongly acid; gradual wavy boundary.

Bt1—7 to 21 inches; yellowish red (5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common distinct clay films on faces of peds; 10 percent angular gravel; very strongly acid; gradual wavy boundary.

Bt2—21 to 30 inches; yellowish red (5YR 5/6) silt loam; weak medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; common very fine flakes of mica; 10 percent angular gravel; very strongly acid; clear irregular boundary.

Cr—30 to 60 inches; highly weathered, tilted sericite schist; platy rock structure, tilted almost vertically; digs out easily.

Range in Characteristics

Thickness of the solum: 20 to 40 inches

Depth to bedrock: Soft bedrock at a depth of 20 to 40 inches and hard bedrock at a depth of more than 60 inches

Content and size of rock fragments: 5 to 35 percent in the A and E horizons; mostly gravel or cobbles

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 2 to 4
Texture—fine sandy loam, loam, or silt loam

BA or BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 or 4
Texture—fine sandy loam, silt loam, or loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 or 6
Texture—loam, silt loam, or clay loam

C horizon (where present):
Color—variegated in shades of yellow, brown, and red
Texture—loam or silt loam

Cr layer:
Type of bedrock—weathered sericite schist or phyllite that can be dug with difficulty with hand tools

Greenville Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Marine sediments
Landscape: Coastal Plain
Landform: Interfluves
Landform position: Summits and side slopes
Slope: 0 to 5 percent
Taxonomic class: Fine, kaolinitic, thermic Rhodic Kandiudults

Commonly Associated Soils

- The fine-loamy Marvyn soils, which are in the lower positions and have a brown solum
- The fine-loamy Springhill soils, which are in the lower positions on side slopes

Typical Pedon

Greenville sandy loam, 0 to 2 percent slopes; in Tallapoosa County, Alabama, about 0.8 mile southeast of Tallassee; 1,350 feet south and 1,100 feet east of the northwest corner of section 29, T. 18 N., R. 22 E.; USGS Tallassee topographic quadrangle; lat. 32 degrees 31 minutes 07 seconds N and long. 85 degrees 52 minutes 33 seconds W.

Ap—0 to 8 inches; dark brown (10YR 3/3) sandy loam; weak fine granular structure; friable; common fine and medium roots; moderately acid; abrupt smooth boundary.

BA—8 to 13 inches; dark reddish brown (2.5YR 3/4) sandy clay loam; weak fine subangular blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt1—13 to 25 inches; dark red (2.5YR 3/6) sandy clay; moderate medium subangular blocky structure; firm; few fine and medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—25 to 49 inches; dark red (2.5YR 3/6) sandy clay; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—49 to 80 inches; dark red (2.5YR 3/6) sandy clay; moderate coarse subangular blocky structure; firm; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 10 percent
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 6
Texture—sandy loam

AB or BA horizon (where present):
Color—hue of 2.5YR to 10YR, value of 2 or 3, and chroma of 4 or 6
Texture—sandy loam or sandy clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 2 or 3, and chroma of 2 to 6
Texture—sandy clay, clay loam, or clay
Mottles (where present)—shades of yellow and brown

Gwinnett Series

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Basic crystalline rock
Landscape: Piedmont
Landform: Hillslopes
Landform position: Summits and side slopes
Slope: 6 to 25 percent
Taxonomic class: Fine, kaolinitic, thermic Rhodic Kanhapludults (fig. 10)

Commonly Associated Soils

- Agricola soils, which are in the higher positions on shoulders and upper side slopes and are moderately deep to bedrock

Figure 10.—A profile of a Gwinnett soil. Gwinnet soils formed in residuum weathered from basic crystalline rock. These dark red, well drained soils have tilted soft bedrock at a depth of 40 to 60 inches.

- Cecil soils, which are in positions similar to those of the Gwinnett soils, lack soft bedrock within 60 inches, and are not rhodic
- Lloyd soils, which are in positions similar to those of the Gwinnett soils and lack soft bedrock within 60 inches
- Pacolet soils, which are in the higher positions and lack soft bedrock within 60 inches

Typical Pedon

Gwinnett gravelly sandy loam, in an area of Gwinnett-Agricola complex, 15 to 25 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 2.9 miles northwest of Camp Hill; 500 feet south and 2,400 feet west of the northeast corner of section 8, T. 21 N., R. 24 E.; USGS Camp Hill topographic quadrangle; lat.32 degrees 49 minutes 41 seconds N. and long. 85 degrees 40 minutes 14 seconds W.

Ap—0 to 3 inches; dark reddish brown (5YR 3/4) gravelly sandy loam; moderate medium granular structure; friable; common fine and medium and few coarse roots; about 5 percent gravel; few fine black (10YR 2/1) masses; very strongly acid; clear smooth boundary.

Bt1—3 to 18 inches; dark red (2.5YR 3/6) clay loam; moderate medium subangular blocky structure; friable; common fine, medium, and coarse roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.
Bt2—18 to 30 inches; dark red (2.5YR 3/6) clay; moderate medium subangular blocky structure; friable; common fine, medium, and coarse roots; common faint clay films on faces of peds; common fine flakes of mica; strongly acid; clear wavy boundary.
C—30 to 45 inches; dark red (2.5YR 3/6) sandy clay loam saprolite from weathered schist; common medium faint red (2.5YR 4/6) mottles; massive; friable; many fine flakes of mica; strongly acid.
Cr—45 to 80 inches; red (2.5YR 4/6) highly weathered hornblende and biotite schist; many fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: Soft bedrock at a depth of 40 to 60 inches and hard bedrock at a depth of more than 60 inches
Content and size of rock fragments: 0 to 20 percent in the A horizon and 0 to 15 percent in the B and C horizons; mostly pebbles and some cobbles
Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 10R to 5YR, value of 3, and chroma of 3 to 6
Texture—sandy loam, loam, or sandy clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 3, and chroma of 4 or 6
Texture—clay, sandy clay, clay loam, or sandy clay loam

C horizon (where present):
Color—hue of 10R to 7.5YR, value of 3 to 6, and chroma of 4 to 8
Texture—loam or sandy clay loam

Cr layer:
Type of bedrock—highly weathered, mixed hornblende, biotite schist, and gneiss that can be dug with difficulty with hand tools

Hard Labor Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Summits and side slopes
Landform position: Linear to slightly concave slopes
Slope: 2 to 10 percent
Taxonomic class: Fine, kaolinitic, thermic Oxyaquic Kanhapludults

Commonly Associated Soils

- The well drained Cecil soils in the higher positions on ridges
- Pacolet soils, which are in the lower positions on shoulders and side slopes and have a thinner solum
- The fine-loamy Rion soils, which are in the lower positions on side slopes

Typical Pedon

Hard Labor loamy sand, 2 to 6 percent slopes; in Tallapoosa County, Alabama, about 1.1 miles northeast of Camp Hill; 300 feet south and 2,100 feet west of the northeast corner of section 15, T. 21 N., R. 24 E.; USGS Camp Hill topographic quadrangle; lat. 32 degrees 48 minutes 50 seconds N. and long. 85 degrees 38 minutes 04 seconds W.

Ap1—0 to 2 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many very fine and fine roots; about 5 percent gravel; moderately acid; clear smooth boundary.

Ap2—2 to 9 inches; brown (10YR 5/3) loamy sand; weak fine granular structure; very friable; many very fine and fine roots; about 5 percent gravel; moderately acid; clear smooth boundary.

E—9 to 15 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; common very fine and fine roots; strongly acid; clear wavy boundary.

Bt1—15 to 27 inches; strong brown (7.5YR 5/6) clay; few medium distinct yellowish red (5YR 5/6) and common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; common very fine and fine roots; common faint clay films on faces of peds; very strongly acid; clear smooth boundary.

Bt2—27 to 45 inches; yellowish red (5YR 5/6) clay; common medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; friable; common very fine and fine roots; common distinct clay films on faces of peds; very strongly acid; clear wavy boundary.

BC—45 to 52 inches; strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; common very fine and fine roots; common medium distinct red (2.5YR 4/6) masses of oxidized iron; light yellowish brown (10YR 6/4) and light gray (10YR 7/1) iron depletions; very strongly acid; clear irregular boundary.

C—52 to 80 inches; variegated sandy clay loam saprolite weathered from granite gneiss; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 10 percent
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 6
Texture—loamy sand, coarse sandy loam, or sandy loam

E horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6
Texture—loamy sand or sandy loam

BA or BE (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 3 to 8
Texture—sandy loam or sandy clay loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma 3 to 8
Texture—sandy clay, clay loam, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray below a depth of 30 inches

BC horizon:
Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of red, yellow, brown, and gray
Texture—sandy clay loam, clay loam, or sandy clay

C horizon:
Color—variegated in shades of red, brown, yellow, and gray
Texture—loamy saprolite

Hiwassee Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Old alluvium from felsic and mafic rock
Landscape: Piedmont
Landform: Stream terraces
Landform position: Slightly convex slopes
Slope: 2 to 6 percent
Taxonomic class: Fine, kaolinitic, thermic Rhodic Kanhapludults

Commonly Associated Soils

- Lloyd soils, which are on adjacent upland positions and formed in residuum
- Mecklenburg soils, which are in the higher positions on ridges and have mixed mineralogy

Typical Pedon

Hiwassee loam, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 2.2 miles southwest of Camp Hill; 600 feet south and 2,100 feet east of the northwest corner of section 10, T. 20 N., R. 23 E.; USGS Thornton topographic quadrangle; lat. 32 degrees 44 minutes 21 seconds N. and long. 85 degrees 44 minutes 29 seconds W.

Ap—0 to 4 inches; dark reddish brown (2.5YR 3/4) loam; moderate medium granular structure; friable; common fine and medium roots; moderately acid; clear wavy boundary.

Bt1—4 to 18 inches; dark red (2.5YR 3/6) clay loam; moderate medium blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—18 to 35 inches; dark red (2.5YR 3/6) clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; few fine flakes of mica; strongly acid; gradual wavy boundary.

Bt3—35 to 60 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; common fine flakes of mica; strongly acid; gradual irregular boundary.

Bt4—60 to 80 inches; red (2.5YR 4/6) sandy clay loam; coarse medium subangular blocky structure; friable; common fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 10 percent
Content of mica flakes: Few to common in the A and B horizons; few to many in the C horizon
Reaction: Strongly acid to slightly acid throughout

Ap or A horizon:
Color—hue of 10R to 5YR, value of 2 or 3, and chroma of 2 to 6
Texture—sandy clay loam, loam, or sandy loam

Bt horizon (upper part):
Color—hue of 10R or 2.5YR, value of 3, and chroma of 2 to 6
Texture—sandy clay, clay loam, silty clay, or clay

Bt horizon (lower part):
Color—hue of 10R or 2.5YR, value of 3 or 4, and chroma of 4 to 8
Texture—sandy clay, clay loam, silty clay, or clay

BCt horizon (where present):
Color—hue of 10R or 2.5YR, value 3 or 4, and chroma of 4 to 8
Texture—clay loam, silty clay, silty clay loam, or sandy clay loam

C horizon (where present):
Color—variegated in shades of yellow, brown, and red
Texture—sandy loam, loam, or sandy clay loam

Note: Hiwassee soils in this survey area are taxadjuncts to the series. Hiwassee soils generally are very-fine, kaolinitic, thermic Rhodic Kanhapludults.

Iuka Series

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy and sandy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Linear to slightly convex treads
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents

Commonly Associated Soils

- Eunola soils, which are in the higher positions on terraces and have a Bt horizon
- The poorly drained Kinston soils in the lower positions on flood plains

Typical Pedon

Iuka sandy loam, in an area of Kinston-Iuka complex, 0 to 1 percent slopes, frequently flooded; in Tallapoosa County, Alabama, about 1.9 miles northeast of Carrville; 250 feet south and 2,300 feet east of the northwest corner of section 10, T. 18 N., R. 22 E.; USGS Carrville topographic quadrangle; lat. 32 degrees 33 minutes 54 seconds N. and long. 85 degrees 50 minutes 32 seconds W.

A1—0 to 5 inches; dark brown (10YR 3/3) sandy loam; weak fine granular structure; friable; many fine, very fine, and medium roots; strongly acid; clear smooth boundary.

A2—5 to 10 inches; dark brown (10YR 3/3) sandy loam that has few thin strata of brownish yellow (10YR 6/6) loamy sand; weak fine granular structure; friable; common fine and very fine roots; strongly acid; abrupt wavy boundary.

C—10 to 21 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; few fine and very fine roots; common medium distinct strong brown (7.5YR 5/6) masses of oxidized iron; few fine faint light brownish gray (10YR 6/2) iron depletions; very strongly acid; abrupt wavy boundary.

Cg1—21 to 36 inches; dark grayish brown (2.5Y 4/2) loam; massive; friable; few soft black masses; common medium distinct brown (7.5YR 4/4) masses of oxidized iron; very strongly acid; abrupt wavy boundary.
Cg2—36 to 42 inches; gray (10YR 5/1) sandy loam; massive; friable; common medium distinct dark yellowish brown (10YR 4/6) and yellowish red stains along root channels and ped faces; strongly acid; abrupt wavy boundary.
Cg3—42 to 80 inches; light gray (10YR 7/1) loamy sand; massive; very friable; common medium distinct light olive brown (2.5Y 5/4) and olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Depth to contrasting soil material: More than 60 inches
Content of rock fragments: 0 to 10 percent
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 2 to 4
Texture—loamy sand, fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6; or variegated in shades of gray, brown, and yellow
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam; or stratified with these textures
Redoximorphic features—masses of oxidized iron in shades of yellow and brown and iron depletions in shades of brown and gray

Cg horizon:
Color—gray or variegated in shades of gray, brown, and red
Texture—variable; commonly sandy loam, fine sandy loam, loam, silt loam, or loamy sand
Redoximorphic features—masses of oxidized iron in shades of red and brown and iron depletions in shades of brown and gray

Kinston Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Loamy and sandy recent alluvium
Landscape: Coastal plain
Landform: Flood plains
Landform position: Linear to slightly concave slopes
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

- Eunola soils, which are in the higher positions on terraces and have a Bt horizon
- The coarse-loamy Iuka soils, which are in the slightly higher positions

Typical Pedon

Kinston silt loam, in an area of Kinston-Iuka complex, 0 to 1 percent slopes, frequently flooded; in Tallapoosa County, Alabama, about 1.0 mile south of Buckville; 350 feet

south and 700 feet west of the northeast corner of section 32, T. 18 N., R. 22 E.; USGS Carrville topographic quadrangle; lat. 32. degrees 30 minutes 25 seconds N. and long. 85 degrees 52 minutes 04 seconds W.

A—0 to 3 inches; dark brown (10YR 4/3) silt loam; weak fine granular structure; friable; many fine, medium, and coarse roots; about 5 percent rounded quartzite gravel; common medium distinct strong brown (7.5YR 4/6) irregular shaped masses of oxidized iron throughout; strongly acid; clear smooth boundary.

Ag—3 to 7 inches; gray (10YR 5/1) silt loam; weak coarse granular structure; friable; many fine, medium, and coarse roots; about 5 percent rounded quartzite gravel; many distinct dark yellowish brown (10YR 4/6) irregular shaped masses of oxidized iron throughout; strongly acid; abrupt smooth boundary.

Cg1—7 to 20 inches; gray (10YR 5/1) silt loam; weak medium subangular blocky structure; friable; common fine, medium, and coarse roots; common medium distinct dark yellowish brown (10YR 4/6) irregular shaped masses of oxidized iron throughout; very strongly acid; clear wavy boundary.

Cg2—20 to 40 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; many fine and medium roots; common medium distinct dark yellowish brown (10YR 4/6) and strong brown (7.5YR 5/8) irregular shaped masses of oxidized iron along root channels; very strongly acid; clear wavy boundary.

Cg3—40 to 80 inches; gray (2.5Y 6/0) loam; massive; few fine roots; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to contrasting soil material: More than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 3 percent
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR, value of 2 to 5, and chroma of 1 to 3
Texture—sandy loam, fine sandy loam, or silt loam

Ag horizon:
Color—hue of 10YR, value of 5, and chroma of 1
Texture—silt loam , sandy loam, or fine sandy loam

Cg horizon:
Color—hue of 10YR to 5Y, value of 3 to 7, and chroma of 1 or 2
Texture—variable; commonly sandy loam, loam, sandy clay loam or clay loam
Redoximorphic features—masses of oxidized iron of higher chroma

Lloyd Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from intermediate and mafic rock
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 15 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Agricola soils, which are in the steeper positions and are moderately deep to bedrock
- Cecil soils, which are in positions similar to those of the Lloyd soils and are not rhodic
- Gwinnett soils, which are on shoulders and side slopes and are deep to bedrock
- Pacolet soils, which are in the lower positions on shoulders and side slopes and have a thinner solum

Typical Pedon

Lloyd loam, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 3.8 miles northeast of Dadeville; 1,400 feet south and 2,000 feet east of the northwest corner of section 30, T. 22 N., R. 24 E.; USGS Camp Hill topographic quadrangle; lat. 32 degrees 52 minutes 08 seconds N. and long. 85 degrees 41 minutes 27 seconds W.

Ap—0 to 4 inches; dark reddish brown (2.5YR 3/4) loam; moderate medium granular structure; friable; common fine and medium roots; moderately acid; clear wavy boundary.

Bt1—4 to 16 inches; dark reddish brown (2.5YR 3/4) clay; weak medium blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—16 to 28 inches; dark red (2.5YR 3/6) clay; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; few fine flakes of mica; strongly acid; gradual wavy boundary.

Bt3—28 to 43 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; common fine flakes of mica; strongly acid; gradual wavy boundary.

BC—43 to 56 inches; red (2.5YR 5/8) silty clay loam; weak coarse subangular blocky structure; friable; common fine flakes of mica; strongly acid; gradual wavy boundary

C—56 to 80 inches; strong brown (7.5YR 5/6) silt loam saprolite from weathered hornblende gneiss; massive; friable; many fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: Greater than 60 inches
Content of rock fragments: 0 to 10 percent in the solum
Reaction: Strongly acid or moderately acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 10R to 5YR, value of 2 or 3, and chroma of 3 to 6
Texture—loam, silt loam, and sandy loam

Bt horizon (upper part):
Color—hue of 10R or 2.5YR, value of 3, and chroma of 4 or 6
Texture—sandy clay, clay loam, silty clay, or clay

Bt horizon (lower part):
Color— hue of 10R or 2.5YR, value of 3 or 4, and chroma of 4 to 8
Texture—sandy clay, clay loam, silty clay, or clay

BC horizon (where present):
Color—10R or 2.5YR, value of 3 to 5, and chroma of 4 to 8
Texture—sandy clay loam, silty clay loam, or clay loam

C horizon:
Color—variegated in shades of yellow, brown, and red
Texture—loam, silt loam, or sandy loam

Louisa Series

Depth class: Shallow
Drainage class: Somewhat excessive
Permeability: Moderately rapid
Parent material: Mica schist and gneiss
Landscape: Piedmont
Landform: Hillslopes, knolls, and escarpments
Landform position: Convex and linear slopes
Slope: 15 to 50 percent
Taxonomic class: Loamy, micaceous, thermic, shallow Typic Dystrudepts

Commonly Associated Soils

- Louisburg soils, which are in the lower positions on side slopes and are very deep to bedrock
- Madison soils, which are in the lower positions on side slopes and broad ridges, have a well developed solum, and are very deep to bedrock
- Pacolet soils, which are in the lower positions on side slopes and are very deep to bedrock

Typical Pedon

Louisa loam, 30 to 50 percent slopes; in Tallapoosa County, Alabama, about 2.1 miles northeast of Zana; 800 feet east and 2,500 feet north of the southwest corner of section 19, T. 24 N., R. 24 E.; USGS New Site topographic quadrangle; lat. 33 degrees 03 minutes 17 seconds N. and long. 85 degrees 41 minutes 42 seconds W.

A—0 to 3 inches; brown (10YR 4/3) loam; moderate medium granular structure; friable; many fine, medium, and coarse roots; common fine flakes of mica; about 10 percent gravel; moderately acid; clear wavy boundary.
Bw1—3 to 10 inches; strong brown (7.5YR 5/6) loam; weak medium subangular blocky structure; friable; common fine and medium roots; many fine and medium flakes of mica; about 5 percent gravel; strongly acid; clear irregular boundary.
Bw2—10 to 17 inches; yellowish red (5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; many fine and medium roots; many fine and medium flakes of mica; about 4 percent gravel; very strongly acid; clear irregular boundary.
Cr—17 to 60 inches; dark yellowish brown (10YR 5/6) highly weathered mica schist that has varying degrees of hardness; platy rock structure, tilted diagonally; rippable and can be dug with hand tools.

Range in Characteristics

Thickness of the solum: 10 to 20 inches
Depth to bedrock: Soft bedrock at a depth of 10 to 20 inches and hard bedrock at a depth of 60 to more than 120 inches
Content of mica flakes: Common to many throughout
Content of rock fragments: 5 to 25 percent in the B horizon and 5 to 60 percent in the C horizon
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, loam, or sandy clay loam or their gravelly modifiers

Bt horizon (where present):
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, loam, or clay loam

C horizon (where present):
Color—variegated in shades of yellow and brown
Texture—loam or sandy loam or their gravelly modifiers

Cr layer:
Type of bedrock—weathered mica schist and gneiss with varying degrees of hardness

Louisburg Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid
Parent material: Granodiorite gneiss
Landscape: Piedmont
Landform: Hillslopes
Landform position: Summits and side slopes
Slope: 6 to 35 percent
Taxonomic class: Coarse-loamy, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Louisa soils, which are in the higher positions on shoulders and are shallow to bedrock
- Pacolet soils, which are in the lower positions on side slopes and have a fine control section
- The fine-loamy Rion soils, which are in the lower positions on side slopes
- Wedowee soils, which are in the lower positions on side slopes and have a fine control section

Typical Pedon

Louisburg gravelly sandy loam, in an area of Louisburg-Rion-Rock outcrop complex, 15 to 35 percent slopes, very stony; in Tallapoosa County, Alabama, about 2.9 miles south of Our Town; 750 feet north and 800 feet west of the southeast corner of section 21, T. 21 N., R. 21 E.; USGS Our Town topographic quadrangle; lat. 32 degrees 47 minutes 10 seconds N. and long. 85 degrees 57 minutes 30 seconds W.

Ap—0 to 8 inches; dark yellowish brown (2.5Y 4/2) gravelly sandy loam; weak medium granular structure; very friable; common fine, medium, and coarse roots; about 15 percent gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

E—8 to 15 inches; pale brown (10YR 6/3) gravelly sandy loam; weak fine subangular blocky structure; very friable; common fine, medium, and coarse roots; 15 percent gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

Bt1—15 to 21 inches; yellowish brown (10YR 5/6) sandy loam; common fine faint brownish yellow (10YR 6/6) mottles; weak medium subangular blocky structure; very friable; common fine and medium roots; sand grains bridged and coated with clay; strongly acid; gradual wavy boundary.

Bt2—21 to 35 inches; strong brown (7.5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; few fine and medium roots; sand grains bridged and coated with clay; strongly acid; clear irregular boundary.

C/Bt—35 to 64 inches; 70 percent pale brown (10YR 7/4) sandy loam saprolite (C part of the horizon); massive; very friable; 30 percent strong brown (7.5YR 5/6) sandy clay loam (B part of the horizon); weak fine subangular blocky structure; friable; very strongly acid.

Cr—64 to 80 inches; weathered, moderately fractured granodioritic gneiss.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 35 percent
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand or sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4
Texture—sandy loam, loamy sand, or loamy coarse sand

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma 4 to 8
Texture—sandy loam, coarse sandy loam, loam, or thin subhorizons of sandy clay loam

C horizon:
Color—variegated, weathered saprolite from felsic and metamorphic rock
Texture—sandy loam

Madison Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Mica schist
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 30 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Cecil soils, which are in positions similar to those of the Madison soils and have less mica
- Louisa soils, which are on shoulders and are shallow to bedrock
- Pacolet soils, which are in the lower positions on side slopes and are very deep to bedrock

Typical Pedon

Madison fine sandy loam, in an area of Madison-Louisa complex, 15 to 30 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 1.2 miles north of Zana; 1,100 feet south and 1,700 feet west of the northeast corner of section 26, T. 24 N., R. 23 E.; USGS Daviston topographic quadrangle; lat. 33 degrees 02 minutes 40 seconds N. and long. 85 degrees 43 minutes 11 seconds W.

Ap—0 to 4 inches; dark brown (7.5YR 4/4) fine sandy loam; moderate medium granular structure; very friable; many fine, medium, and coarse roots; few fine flakes of mica; about 5 percent gravel; strongly acid; clear wavy boundary.

BE—4 to 10 inches; yellowish red (5YR 5/6) sandy clay loam; few medium distinct brown (7.5YR 5/4) mottles; moderate fine granular structure; friable; common fine and medium roots; common fine flakes of mica; about 4 percent gravel; very strongly acid; clear wavy boundary.

Bt—10 to 23 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable; common fine and medium roots; common distinct clay films on faces of peds; common fine flakes of mica; about 4 percent gravel; strongly acid; gradual wavy boundary.

BC—23 to 28 inches; red (2.5YR 4/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; many fine flakes of mica; very strongly acid; gradual wavy boundary.

C/Bt—28 to 40 inches; saprolite from weathered schist (C part of the horizon); massive; many flakes of mica; red (2.5YR 4/8) sandy clay loam (B part of the horizon); weak coarse subangular blocky structure; friable; few fine roots; many fine and medium flakes of mica; firm; very strongly acid; clear irregular boundary.

C—40 to 80 inches; yellowish brown (10YR 5/6) sandy loam saprolite from weathered mica schist; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 50 inches
Depth to bedrock: More than 72 inches
Content of mica flakes: Few to many
Content and size of rock fragments: 0 to 10 percent; mostly angular gravel
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 8
Texture—fine sandy loam, sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8
Texture—fine sandy loam, sandy loam, loam, or sandy clay loam

Bt horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay, clay loam, or clay

BC horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, loam, sandy clay loam, or clay loam
Mottles—shades of red, yellow, and brown

C horizon:
Color—variegated in shades of yellow, brown, and red
Texture—sandy loam or sandy clay loam

Cr layer (where present):
Type of bedrock—weathered mica schist that can be dug with difficulty with hand tools

Marvyn Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Flats, interfluves, and hillslopes
Landform position: Summits and side slopes
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Cowarts soils, which are in positions similar to those of the Marvyn soils or are in the more convex positions on slopes and have a thinner solum
- Greenville soils, which are in the slightly higher positions and are very deep
- Springhill soils, which are in positions on greater slopes and have a deeper and redder solum than the Marvyn soils

Typical Pedon

Marvyn loamy sand, 2 to 5 percent slopes; in Tallapoosa County, Alabama, about 3.4 miles northeast of Carrville; 1,250 feet south and 1,150 feet east of the northwest corner of section 12, T. 18 N., R. 22 E.; USGS Carrville topographic quadrangle; lat. 32 degrees 33 minutes 43 seconds N. and long. 85 degrees 48 minutes 43 seconds W.

Ap—0 to 8 inches; brown (10YR 5/3) loamy sand; weak fine granular structure; very friable; many fine and medium roots; about 5 percent quartzite gravel; strongly acid; abrupt smooth boundary.

Bt1—8 to 22 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; less than 5 percent gravel; strongly acid; clear wavy boundary.

Bt2—22 to 37 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; few fine flakes of mica; common medium distinct yellowish red (5YR 5/6) and yellowish brown (10YR 6/6) masses of oxidized iron; strongly acid; clear wavy boundary.

Bt3—37 to 60 inches; yellowish brown (10YR 5/6) sandy clay; weak very coarse subangular blocky structure; friable; slightly brittle; common fine roots; common faint clay films on faces of peds; few nodules of plinthite; common fine flakes of mica; common medium distinct yellowish red (5YR 5/6) and strong brown (7.5YR 5/6) irregular shaped masses of oxidized iron; light yellowish brown (2.5Y 6/4) iron depletions throughout; very strongly acid; clear wavy boundary.

C1—60 to 70 inches; variegated yellowish red (5YR 5/6), brownish yellow (10YR 6/6), red (2.5YR 4/6), and light gray (2.5Y 7/2) clay; massive; firm; few thin strata of sandy loam and sandy clay loam; few nodules of plinthite; common fine flakes of mica; less than 5 percent quartzite gravel; very strongly acid; clear wavy boundary.

C2—70 to 85 inches; variegated red (2.5YR 4/6), brownish yellow (10YR 6/8), and light yellowish brown (2.5Y 6/4) clay; massive; firm; few thin strata of sandy loam

and sandy clay loam; less than 5 percent quartzite gravel; common fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Content of rock fragments: 0 to 10 percent
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
Texture—loamy sand or sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma 4 to 8
Texture—sandy clay loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma 4 to 8
Texture—clay loam or sandy clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown and gray

C horizon:
Color—variegated in shades of red, brown, yellow, and gray
Texture—sandy loam to clay; typically stratified

Mecklenburg Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Intermediate and mafic crystalline rock
Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 15 percent
Taxonomic class: Fine, mixed, active, thermic Ultic Hapludalfs (fig. 11)

Commonly Associated Soils

- Enon soils, which are in the lower positions and have a yellow or brown subsoil
- Wilkes soils, which are in the higher shoulder positions and are shallow to bedrock
- Winnsboro soils, which are in the higher positions on shoulders and are deep to bedrock
- Wynott soils, which are on the lower, narrow ridges and are moderately deep to bedrock

Typical Pedon

Mecklenburg gravelly sandy loam, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama; about 1,250 feet north and 2,400 feet east of the southwest corner of section 27, T. 22 N., R. 24 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 51 minutes 44 seconds N. and long. 85 degrees 38 minutes 16 seconds W.

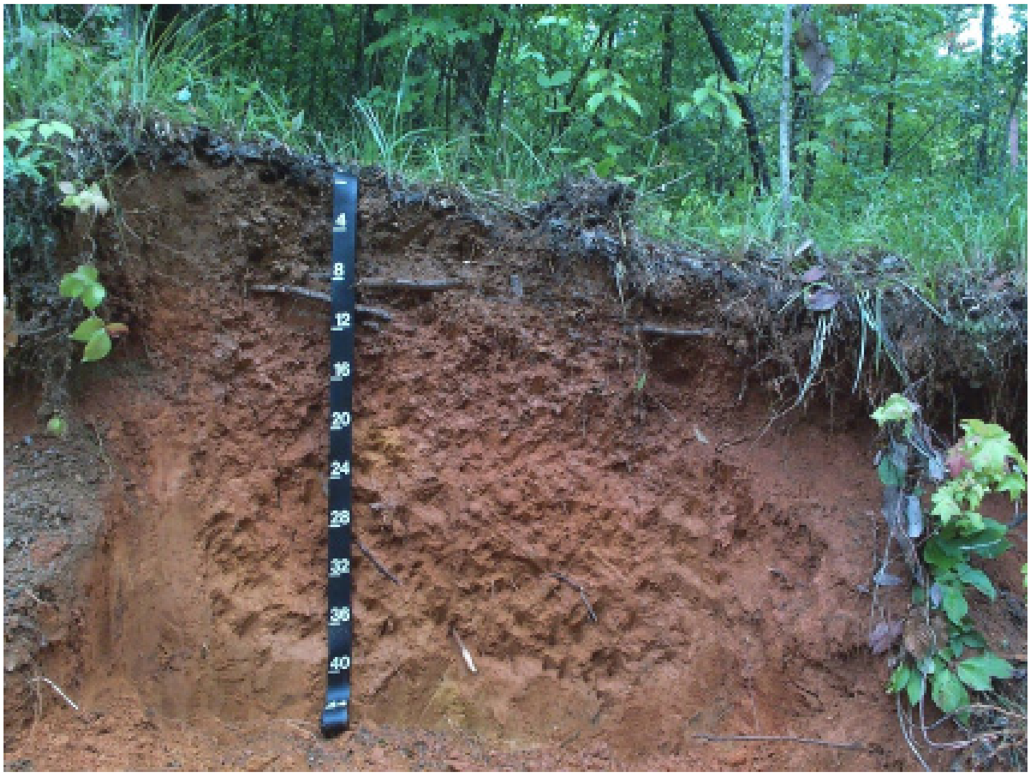

Figure 11.—A profile of a Mecklenburg soil. Mecklenburg soils formed in residuum weathered from intermediate and mafic crystalline rock. These very deep, well drained soils have a clayey subsoil.

A—0 to 4 inches; reddish brown (5YR 4/3) gravelly sandy loam; weak fine granular structure; very friable; common fine and medium roots; 25 percent gravel and 10 percent cobbles; strongly acid; clear wavy boundary.

Bt1—4 to 15 inches; red (2.5YR 4/6) clay; moderate medium granular structure; firm; common fine and medium roots; common clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—15 to 25 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; common clay films on faces of peds; few medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; moderately acid; gradual wavy boundary.

BC—25 to 33 inches; about 50 percent red (2.5YR 4/8) and about 50 percent brownish yellow (10YR 6/6) clay loam; weak fine subangular blocky structure; firm; few fine roots; common clay films on faces of peds; common fine and medium black concretions; moderately acid; clear wavy boundary.

C/Bt—33 to 60 inches; variegated loam saprolite (C part of the horizon); massive; red (2.5YR 4/8) clay loam (Bt part of the horizon); weak medium subangular blocky structure; friable; few fine roots; slightly acid; clear wavy boundary.

C—60 to 80 inches; about 50 percent strong brown (7.5YR 5/6) and about 50 percent yellowish brown (10YR 5/8) loam; massive; slightly acid.

Range in Characteristics

Thickness of the solum: 20 to 60 inches

Content and size of rock fragments: 15 to 30 percent in the A horizon and 0 to 10 percent in the B horizon; mostly gravel and cobbles

Reaction: Strongly acid to slightly acid in the A horizon and moderately acid to neutral in the B and C horizons

A or Ap horizon:
Color—hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 2 to 6
Texture—sandy loam, loam, or clay loam or gravelly analogues of these textures

Bt horizon (upper part):
Color—hue of 2.5YR or 5YR, value of 3 to 6, and chroma of 4 to 8
Texture—clay

Bt horizon (lower part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—clay
Redoximorphic features (where present)—relict and contemporary masses of oxidized iron in shades of brown, yellow, and red

BC horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 7, and chroma of 4 to 8; or variegated in shades of red and brown
Texture—sandy clay loam, clay loam, or loam

C horizon:
Color—variegated saprolite in shades of brown, yellow, black, and white
Texture—variable; commonly sandy loam or loam

Mountain Park Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Mica schist
Landscape: Piedmont
Landform: Hillslopes and escarpments
Landform position: Side slopes
Slope: 30 to 50 percent
Taxonomic class: Fine loamy, micaceous, thermic Typic Hapludults

Commonly Associated Soils

- Madison soils, which are on shoulders and have less mica than the Mountain Park soils
- Louisa soils, which are in positions similar to those of the Mountain Park soils and are shallow to bedrock
- Rion soils, which are in positions on the lower side slopes and are very deep to bedrock

Typical Pedon

Mountain Park gravelly sandy loam, in an area of Louisa-Mountain Park complex, 30 to 50 percent slopes; in Fulton County, Georgia, about 150 feet east of Juniper Street and 800 feet north of Rocky Creek; USGS Mountain Park topographic quadrangle; lat. 34 degrees 04 minutes 58 seconds N. and long. 84 degrees 24 minutes 19 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 3/4) gravelly sandy loam; weak fine granular structure; friable; many fine, medium, and coarse roots; common fine flakes of mica; about 24 percent gravel; very strongly acid; clear smooth boundary.

BE—4 to 10 inches; brown (7.5YR 4/4) gravelly sandy loam; weak fine subangular blocky structure parting to moderate fine granular; friable; many very fine and fine and common medium and coarse roots; many fine flakes of mica; about 25 percent gravel; very strongly acid; clear wavy boundary.
Bt—10 to 23 inches; yellowish red (5YR 4/6) gravelly sandy clay loam; moderate fine subangular blocky structure; friable; common fine and medium roots; common distinct clay films on faces of peds; common fine flakes of mica; about 4 percent gravel; strongly acid; gradual wavy boundary.
BC—23 to 32 inches; yellowish red (5YR 4/6) gravelly sandy loam; weak fine subangular blocky structure; friable; few very fine to medium roots; few faint clay films on faces of peds; many fine flakes of mica; about 5 percent gravel; very strongly acid; clear wavy boundary.
Cr—32 to 46 inches; strong brown (7.5YR 5/6) and yellowish red (5YR 4/6) mica schist; strongly acid; clear wavy boundary.
C—46 to 55 inches; strong brown (7.5YR 4/6) sandy loam; massive; friable; strongly acid; clear wavy boundary
Cr—55 to 80 inches; moderately hard mica schist; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Content of mica flakes: Common to many
Content and size of rock fragments: 0 to 30 percent; mostly angular gravel
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 8
Texture—fine sandy loam, sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8
Texture—fine sandy loam, sandy loam, loam, or sandy clay loam

Bt horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay, clay loam, or clay

C horizon:
Color—variegated in shades of yellow, brown, and red
Texture—sandy loam, loam, or clay loam

Cr layer (where present):
Type of bedrock—weathered mica schist that can be dug with difficulty with hand tools

Pacolet Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 3 to 25 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Cecil soils, which are in the higher positions on the broader ridges and have a deeper solum than the Pacolet soils
- The moderately well drained Hard Labor soils in the lower positions on toe slopes
- The fine-loamy Rion soils, which are in the lower positions on side slopes

Typical Pedon

Pacolet gravelly sandy loam, 6 to 15 percent slopes, eroded; in Coosa County, Alabama, about 2.0 miles north of Kellyton; 700 feet north and 400 feet west of the southeast corner of section 2, T. 23 N., R. 20 E.; USGS Goodwater topographic quadrangle; lat. 33 degrees 00 minute 24 seconds N. and long. 86 degrees 01 minute 45 seconds W.

Ap—0 to 4 inches; dark yellowish brown (10YR 3/4) gravelly sandy loam; weak fine granular structure; very friable; about 15 percent gravel; strongly acid; clear wavy boundary.

BA—4 to 9 inches; dark yellowish brown (10YR 4/4) and red (2.5YR 4/6) clay loam; weak medium subangular blocky structure; friable; many fine and medium and common coarse roots; common faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt—9 to 25 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; common faint clay films on faces of peds; very strongly acid; gradual irregular boundary.

Bt/C—25 to 36 inches; red (2.5YR 4/6) clay (Bt part of the horizon); moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; very strongly acid; variegated sandy clay loam (C part of the horizon); massive; friable; strongly acid; clear irregular boundary.

C/Bt—36 to 56 inches; variegated sandy loam (C part of the horizon); massive; friable; very strongly acid; red (2.5YR 4/8) clay (Bt part of the horizon); moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; very strongly acid; clear irregular boundary.

C—56 to 80 inches; variegated sandy loam saprolite weathered from diorite gneiss; rock structure of parent material controls structure; friable; common fine flakes of feldspar; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to more than 40 inches
Depth to bedrock: More than 80 inches
Content and size of rock fragments: 0 to 30 percent; mostly angular gravel
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 8
Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay loam, clay loam, or loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma 6 or 8

Texture—sandy clay, clay loam, or clay
Mottles—shades of red, yellow, and brown

C horizon:
Color—variegated in shades of red, brown, and yellow
Texture—loamy saprolite

Rion Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Hillslopes
Landform position: Summits and side slopes
Slope: 6 to 35 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Louisburg soils, which are in the higher positions on shoulders
- Pacolet soils, which are on the lower side slopes and have a fine control section
- Wedowee soils, which are in the lower positions on side slopes and have a fine control section

Typical Pedon

Rion gravelly sandy loam, in an area of Pacolet-Rion complex, 15 to 25 percent slopes, moderately eroded, stony; in Tallapoosa County, Alabama; 125 feet south and 2,400 feet east of the northwest corner of section 3, T. 23 N., R. 21 E.; USGS Hackneyville topographic quadrangle; lat. 33 degrees 00 minute 59 seconds N. and long. 85 degrees 56 minute 56 seconds W.

A—0 to 5 inches; dark brown (10YR 4/3) gravelly sandy loam; weak fine granular structure; very friable; many fine and medium roots; 20 percent gravel; moderately acid; clear wavy boundary.
Bt1—5 to 16 inches; yellowish brown (10YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; strongly acid; clear wavy boundary.
Bt2—16 to 32 inches; yellowish red (5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; few fine roots; common faint patchy clay films on faces of peds; very strongly acid; gradual wavy boundary.
BC—32 to 39 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; very strongly acid; gradual wavy boundary.
C1—39 to 47 inches; brownish yellow (10YR 6/6) sandy loam saprolite; massive; friable; very strongly acid; gradual wavy boundary.
C2—47 to 80 inches; brownish yellow (10YR 6/8) sandy loam saprolite; massive; friable; very strongly acid

Range in Characteristics

Thickness of the solum: 20 to 50 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 35 percent; mostly gravel
Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6
Texture—fine sandy loam or sandy loam

E horizon (where present):
Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6
Texture—sandy loam, loamy coarse sand, or loam

Bt horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma 4 to 8
Texture—sandy clay loam, sandy loam, loam, or clay loam

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, clay loam, sandy clay loam, sandy loam, or fine sandy loam

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—saprolite that crushes to textures of loamy sand, loam, fine sandy loam, or sandy clay loam

Saw Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Ridges, knolls, and shoulders
Landform position: Convex slopes
Slope: 2 to 8 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- The moderately well drained Hard Labor soils in the lower positions on toe slopes
- Louisburg soils, which are in the lower positions on side slopes and are very deep to bedrock
- Pacolet soils, which are in positions similar to those of the Saw soils and are very deep to bedrock
- The fine-loamy Rion soils, which are in the lower positions on side slope
- Wedowee soils, which are on the more level, wider parts of ridges and are very deep to bedrock

Typical Pedon

Saw sandy loam, in an area of Wedowee-Saw complex, 2 to 10 percent slopes, very bouldery; in Tallapoosa County, Alabama, south of Alexander City; 950 feet south and 750 feet east of the northwest corner of section 10, T. 22 N., R. 21 E.; USGS Alexander City topographic quadrangle; lat. 32 degrees 54 minutes 31 seconds N. and long. 85 degrees 57 minutes 13 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) sandy loam; weak medium granular structure; very friable; common fine and medium roots; slightly acid; clear smooth boundary.

E—5 to 9 inches; pale yellow (2.5Y 7/4) sandy loam; weak fine granular structure; very friable; many fine and medium roots; slightly acid; clear wavy boundary.

Bt1—9 to 15 inches; yellowish brown (10YR 5/6) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; few strong brown (7.5YR 5/6) masses of oxidized iron; moderately acid; clear smooth boundary.
Bt2—15 to 23 inches; reddish yellow (5YR 6/6) clay; strong medium subangular blocky structure; firm; few fine roots; common distinct pale yellow (2.5Y 7/4) clay films on faces of peds; common medium distinct olive yellow (2.5Y 6/6) and red (2.5YR 4/6) masses of oxidized iron; light grayish brown (2.5Y 6/2) iron depletions; strongly acid; clear wavy boundary.
BC—23 to 31 inches; yellow (10YR 7/6) sandy clay loam; weak coarse subangular blocky structure; friable; common medium distinct olive yellow (2.5Y 6/6) and red (2.5YR 4/6) masses of oxidized iron; strongly acid; clear wavy boundary.
C—31 to 34 inches; variegated sandy loam saprolite; massive; firm; few fine and very fine roots; very strongly acid; clear smooth boundary.
R—34 to 80 inches; unweathered, hard, moderately fractured granodioritic gneiss.

Range in Characteristics

Thickness of the solum: 19 to 33 inches
Depth to bedrock: Hard bedrock at a depth of 20 to 40 inches
Content of rock fragments: 0 to 30 percent
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 6
Texture—sandy loam or fine sandy loam

E horizon:
Color—hue of 5YR to 10YR, value 4 to 6, and chroma of 3 to 8
Texture—sandy loam

BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 6 or 8
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of yellow, brown, and red and iron depletions in shades of yellow, brown, and gray

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 or 8
Texture—sandy clay loam, clay loam, or sandy loam

C horizon:
Color—variegated in shades of yellow, red, brown, and gray
Texture—sandy loam

R layer:
Type of bedrock—unweathered, slightly fractured, hard granite diorite or granite gneiss

Springhill Series

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Parent material: Loamy and sandy marine sediments
Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Slightly convex shoulders and linear side slopes
Slope: 5 to 15 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Cowarts soils, which are in the more convex positions and have a thinner solum than the Springhill soils
- Greenville soils, which are on the broader ridges and have a fine control section
- Marvyn soils, which are in the more level positions and have a brown solum
- Uchee soils, which are in the lower positions on side slopes and are arenic

Typical Pedon

Springhill sandy loam, 5 to 15 percent slopes; in Tallapoosa County, Alabama, 150 feet from the edge of an open field, about 2.0 miles north of Carrville; 2,650 feet north and 800 feet east of the southwest corner of section 5, T. 18 N., R. 22 E.; USGS Tallassee topographic quadrangle; lat. 32 degrees 34 minutes 21 seconds N. and long. 85 degrees 52 minutes 54 seconds W.

Ap1—0 to 5 inches; dark brown (7.5YR 3/3) sandy loam; moderate medium granular structure; friable; many fine, medium, and coarse roots; 10 percent rounded gravel; strongly acid; clear wavy boundary.

Ap2—5 to 8 inches; dark brown (7.5YR 4/3) sandy loam; weak fine granular structure; many fine, medium, and coarse roots; about 5 percent rounded gravel; strongly acid; clear wavy boundary.

Ab—8 to 12 inches; brown (7.5YR 4/4) sandy loam; moderate medium granular structure; friable; many fine and medium roots; 5 percent quartzite gravel; strongly acid; clear wavy boundary.

BA—12 to 17 inches; strong brown (7.5YR 5/6) heavy sandy loam; weak medium subangular blocky structure; friable; many fine and medium roots; 5 percent quartzite gravel; very strongly acid; gradual wavy boundary.

Bt1—17 to 37 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; 5 percent quartzite gravel; very strongly acid; gradual wavy boundary.

Bt2—37 to 52 inches; red (2.5YR 4/8) sandy clay loam; few fine and medium distinct brownish yellow (10YR 6/8) mottles; moderate medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—52 to 59 inches; red (2.5YR 4/8) sandy loam; common fine and medium distinct brownish yellow (10YR 6/8) mottles; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

BC—59 to 63 inches; yellowish red (5YR 5/8) sandy loam; common medium distinct brownish yellow (10YR 6/8) and yellowish brown (10YR 5/4) mottles; weak coarse subangular blocky structure; friable; few faint clay films on faces of some peds; very strongly acid; gradual wavy boundary.

C—63 to 80 inches; variegated red (2.5YR 4/8), strong brown (7.5YR 5/8), and grayish brown (10YR 5/2) sandy loam that has strata of sandy clay loam; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Content and size of rock fragments: 0 to 10 percent; mostly gravel
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—sandy loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture—loamy sand or sandy loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma 4 to 8
Texture—sandy loam or sandy clay loam
Mottles—shades of yellow, brown, and red in the lower part

BC horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Mottles—shades of yellow, brown, and red

C horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or loamy sand

Tallapoosa Series

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Parent material: Phyllite and sericite schist
Landscape: Piedmont
Landform: Narrow ridges and hillslopes
Landform position: Summits and side slopes
Slope: 3 to 40 percent
Taxonomic class: Loamy, mixed, thermic, shallow Typic Hapludults (fig. 12)

Commonly Associated Soils

- Badin soils, which are in the lower positions on side slopes and are moderately deep to bedrock
- Fruithurst soils, which are in positions similar to those of the Tallapoosa soils, are moderately deep, and have a fine-loamy control section
- Louisa soils, which are in positions similar to those of the Tallapoosa soils and are shallow to mica schist bedrock
- Madison soils, which are in the lower positions on side slopes and are very deep to mica schist bedrock

Typical Pedon

Tallapoosa gravelly loam, in an area of Tallapoosa-Fruithurst complex, 15 to 40 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 1.2 miles northwest of Smith Mountain; 800 feet south and 1,900 feet east of the northwest corner of section 10, T. 21 N., R. 22 E.; USGS Dadeville topographic quadrangle; lat. 32 degrees 49 minutes 28 seconds N. and long. 85 degrees 50 minutes 46 seconds W.

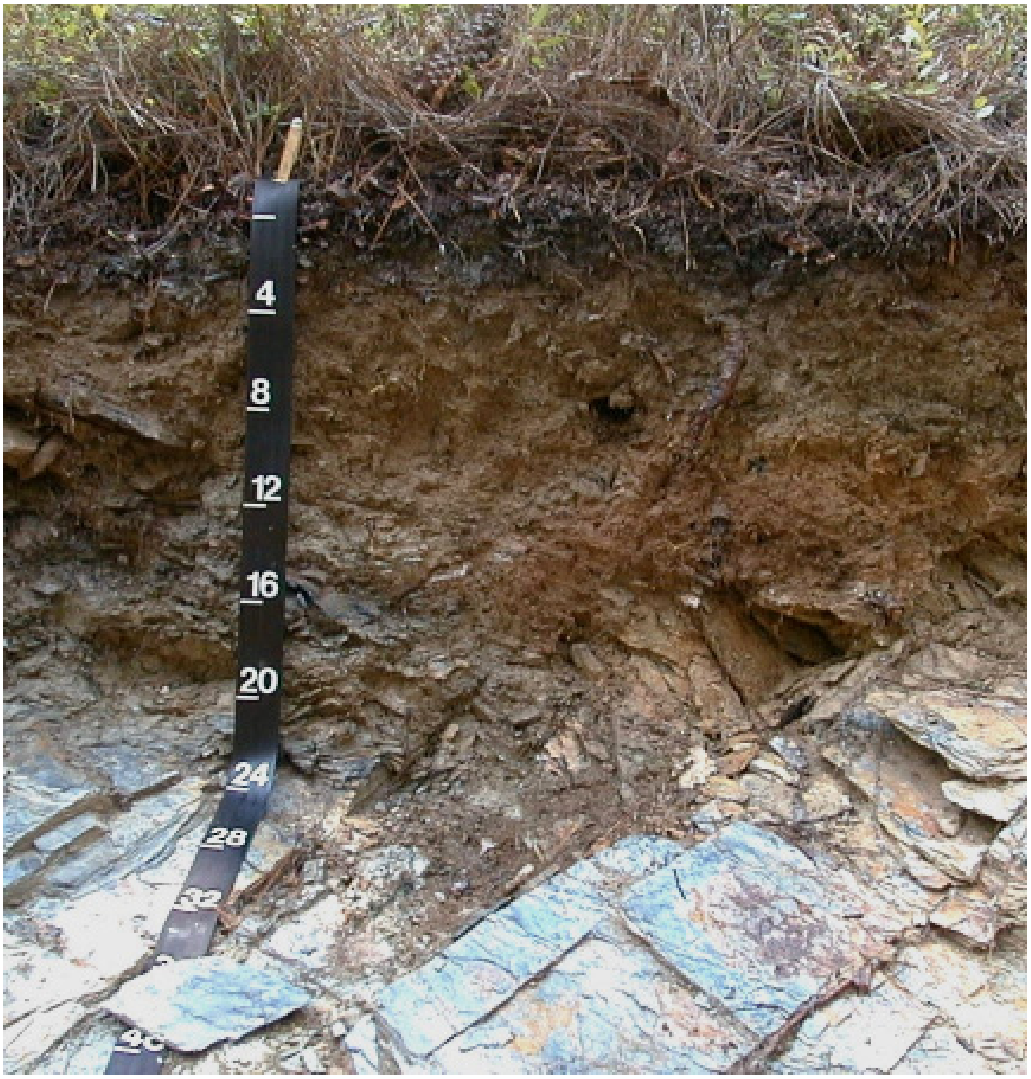

Figure 12.—A profile of a Tallapoosa soil. Tallapoosa soils formed in residuum weathered from phyllite. These somewhat excessively drained soils have soft bedrock at shallow depths and are droughty during dry periods.

A—0 to 4 inches; reddish brown (5YR 4/4) gravelly loam; weak medium granular structure; very friable; common fine, medium, and coarse roots; few fine flakes of mica; 25 percent angular gravel; strongly acid; clear wavy boundary.

E—4 to 8 inches; yellowish red (5YR 5/6) gravelly loam; weak medium granular structure; very friable; common fine, medium, and coarse roots; common fine flakes of mica; 25 percent angular gravel; strongly acid; clear wavy boundary

BE—8 to 12 inches; yellowish red (5YR 4/6) clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine and medium flakes of mica; 10 percent angular gravel; strongly acid; gradual wavy boundary.

Bt—12 to 16 inches; red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; friable; common fine and medium and few coarse roots; common faint clay films on faces of peds; common fine flakes of mica; very strongly acid; clear irregular boundary.

Cr—16 to 80 inches; red (2.5YR 4/8) highly weathered schist or slate; platy rock structure, tilted diagonally; few fine roots in fractures; red (2.5YR 4/8) loam in fractures.

Range in Characteristics

Thickness of the solum: 10 to 20 inches
Depth to bedrock: 10 to 20 inches
Content of mica flakes: Few to many
Content and size of rock fragments: 0 to 35 percent in the A, E, and BE horizons and 0 to 15 percent in the B horizon; mostly gravel or cobbles
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6
Texture—loam or gravelly analogues of this texture

E or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8
Texture—silt loam, loam, or silty clay loam or gravelly analogues of these textures

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, silty clay loam, or clay loam or gravelly analogues of these textures

C horizon (where present):
Color—variegated in shades of yellow, brown, and red
Texture—silty clay loam or silt loam

Cr layer:
Type of bedrock—weathered sericite schist or phyllite that can be dug with difficulty with hand tools

Tatum Series

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Phyllite and sericite schist
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and shoulders
Slope: 2 to 10 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Badin soils, which are in positions similar to those of the Tatum soils, are on upper side slopes, and are moderately deep to bedrock
- The fine-loamy Fruithurst soils, which are in the higher positions on shoulders and are moderately deep
- Tallapoosa soils, which are in the higher positions on shoulders and are shallow to bedrock

Typical Pedon

Tatum gravelly loam, in an area of Badin-Tatum-Tallapoosa complex, 2 to 6 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 0.75 mile southwest of Goldville; 1,350 feet north and 1,300 feet east of the southwest corner of section 7,

T. 24 N., R. 23 E.; USGS New Site topographic quadrangle lat. 33 degrees 04 minutes 44 seconds N. and long. 85 degrees 47 minutes 47 seconds W.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) gravelly loam; weak medium granular structure; friable; common fine and medium and few coarse roots; about 15 percent coarse fragments; strongly acid; clear wavy boundary.

BE—5 to 10 inches; strong brown (7.5YR 4/6) loam; moderate medium granular structure; friable; common fine and medium and few coarse roots; about 10 percent coarse fragments; strongly acid; gradual wavy boundary.

Bt1—10 to 15 inches; yellowish red (5YR 4/6) silty clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common medium distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—15 to 31 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; few fine and medium roots; very strongly acid; gradual wavy boundary.

Bt3—31 to 42 inches; red (2.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; few fine and medium roots; very strongly acid; gradual irregular boundary

Cr—42 to 80 inches; red (2.5YR 4/8) highly weathered, tilted phyllite; platy rock structure, tilted diagonally; rippable and can be dug with hand tools.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 40 to 60 inches
Content of rock fragments: 0 to 15 percent in the solum
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 8
Texture—loam, silt loam, or fine sandy loam

E horizon (where present):
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 3 to 6
Texture—loam or silt loam

BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8
Texture—loam, silt loam, or silty clay loam

Bt horizon:
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 4 to 8
Texture—silty clay, silty clay loam, clay loam, or clay

C horizon (where present):
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—silty clay loam or silt loam

Cr layer:
Type of bedrock—weathered sericite schist or phyllite that can be dug with difficulty with hand tools

Toccoa Series

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderately rapid
Parent material: Sandy and loamy alluvium
Landscape: Upper Coastal Plain and Piedmont
Landform: Flood plains
Landform position: Linear to slightly convex treads
Slope: 0 to 4 percent
Taxonomic class: Coarse-loamy, mixed, active, nonacid, thermic Typic Udifluvents

Commonly Associated Soils

- Buncombe soils, which are in positions similar to those of the Toccoa soils and have a sandy control section
- The somewhat poorly drained Chewacla and Cartecay soils in the lower, more level positions
- The fine-loamy Wehadkee soils, which are in the lower, broader positions

Typical Pedon

Toccoa fine sandy loam, in an area of Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded; in Tallapoosa County, Alabama, about 3.9 miles south of Zana; 300 feet north and 2,050 feet east of the southwest corner of section 31, T. 24 N., R. 24 E.; USGS Daviston topographic quadrangle; lat. 33 degrees 01 minute 10 seconds N. and long. 85 degrees 41 minutes 25 seconds W.

Ap—0 to 4 inches; dark brown (7.5YR 4/3) fine sandy loam; moderate fine granular structure; friable; common fine and medium roots; common fine flakes of mica; moderately acid; clear smooth boundary.
C1—4 to 28 inches; strong brown (7.5YR 4/6) stratified sandy loam and loamy sand; massive; friable; common fine and very fine roots; many fine flakes of mica; moderately acid; gradual wavy boundary.
C2—28 to 36 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; friable; many fine flakes of mica; very strongly acid; clear irregular boundary.
Ab—36 to 43 inches; dark brown (10YR 4/3) silt loam; massive; friable; common fine flakes of mica; very strongly acid; clear wavy boundary.
C'—43 to 80 inches; light yellowish brown (10YR 6/4) sandy loam; massive; friable; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; many fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 4 to 17 inches
Depth to contrasting soil material: More than 60 inches
Depth to bedrock: More than 60 inches
Content of rock fragments: 0 to 15 percent in the solum
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam or stratified with these textures
Redoximorphic features (where present)—masses of oxidized iron in shades of brown and iron depletions in shades of brown and gray below 20 inches

Ab horizon (where present):
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, fine sandy loam, sandy loam, loam, or silt loam

Uchee Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Loamy and sandy marine sediments
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Ridgetops and side slopes
Slope: 15 to 35 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Kanhapludults

Commonly Associated Soils

- Cowarts soils, which are in positions similar to those of the Uchee soils and are not arenic
- Marvyn soils, which are in positions similar to those of the Uchee soils, are on more level slopes, have a deeper solum, and are not arenic
- Springhill soils, which are on the more level slopes and have a deeper and redder solum than the Uchee soils

Typical Pedon

Uchee loamy sand, in an area of Cowarts-Uchee complex, 15 to 25 percent slopes; in Tallapoosa County, Alabama, about 1.4 miles northwest of Barroom; 350 feet north and 400 feet east of the southwest corner of section 24, T. 18 N., R. 22 E.; USGS Carrville topographic quadrangle; lat. 32 degrees 31 minutes 25 seconds N. and long. 85 degrees 48 minutes 50 seconds W.

Ap—0 to 6 inches; brown (10YR 4/3) loamy sand; single grain; very friable; many medium and coarse roots; about 5 percent rounded gravel; strongly acid; clear wavy boundary.

E1—6 to 21 inches; yellowish brown (10YR 5/4) loamy sand; single grain; very friable; common fine and medium roots; about 5 percent rounded gravel; very strongly acid; clear wavy boundary.

E2—21 to 29 inches; yellowish brown (10YR 5/6) sandy loam; moderate medium granular structure; very friable; few fine, medium, and coarse roots; about 5 percent rounded gravel; very strongly acid; clear wavy boundary.

Bt1—29 to 40 inches; strong brown (7.5YR 5/6) sandy clay loam; weak coarse subangular blocky structure parting to moderate medium subangular blocky; friable; common fine and medium roots; few faint clay films on faces of peds; about 5 percent rounded gravel; very strongly acid; gradual wavy boundary.

Bt2—40 to 50 inches; strong brown (7.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; slightly brittle; few fine roots; common faint clay films on faces of peds; about 5 percent rounded gravel; very strongly acid; clear wavy boundary.

C1—50 to 64 inches; variegated yellowish red (5YR 5/6), strong brown (7.5YR 5/8), brownish yellow (10YR 6/8), and light gray (10YR 7/2) stratified and streaked sandy clay loam and sandy loam; massive; firm; very strongly acid; gradual wavy boundary.

C2—64 to 80 inches; variegated brownish yellow (10YR 6/8), light gray (10YR 7/1), and red (2.5YR 4/8) stratified and streaked sandy clay, sandy clay loam, and sandy loam; massive; firm; few plinthite nodules; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Content of rock fragments: 0 to 35 percent in the A and E horizons and 0 to 15 percent in the B and C horizons
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, or loamy coarse sand or gravelly analogues of these textures

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 6
Texture—loamy sand, loamy fine sand, or loamy coarse sand or gravelly analogues of these textures

EB or BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 4 to 8
Texture—loamy sand or sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma 4 to 8
Texture—sandy loam, sandy clay loam, or sandy clay
Mottles—shades of red, yellow, brown, and gray

BC horizon (where present):
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam, sandy loam, or loamy sand
Mottles—shades of red, yellow, brown, and gray

C horizon:
Color—variegated in shades of red, brown, yellow, and gray
Texture—sandy loam, sandy clay loam, or sandy clay; commonly strata and streaks of finer or coarser material

Wedowee Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Felsic crystalline rock
Landscape: Piedmont
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 3 to 35 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- The moderately well drained Hard Labor soils in the lower positions on toe slopes
- Louisburg soils, which are in the lower positions on side slope and are very deep to bedrock

- Pacolet soils, which are in positions similar to those of the Wedowee soils and have a red solum
- The fine-loamy Rion soils, which are in the lower positions on side slopes
- Saw soils, which are in the more convex positions on knolls and are moderately deep to bedrock

Typical Pedon

Wedowee gravelly sandy loam, 3 to 10 percent slopes, moderately eroded; in Tallapoosa County, Alabama, about 100 feet north of Coley Creek Rd.; 1,000 feet south and 550 feet west of the northeast corner of section 6, T. 22 N., R. 22 E.; USGS Goodwater topographic quadrangle; lat. 32 degrees 55 minutes 31 seconds N. and long. 85 degrees 53 minute 21 seconds W.

Ap—0 to 2 inches; dark brown (10YR 3/3) gravelly sandy loam; weak medium granular structure; very friable; many fine, medium, and coarse roots; about 15 percent gravel; strongly acid; clear wavy boundary.

BE—2 to 5 inches; light yellowish brown (10YR 6/4) sandy loam; weak fine granular structure; friable; common fine, medium, and coarse roots; strongly acid; clear wavy boundary.

Bt1—5 to 15 inches; yellowish red (5YR 5/8) clay; moderate medium and coarse subangular blocky structure; firm; common fine and medium roots; common faint clay films on faces of peds; common feldspars; common fine and medium flakes of mica; very strongly acid; gradual wavy boundary.

Bt2—15 to 28 inches; yellowish red (5YR 5/6) clay; common medium distinct yellowish brown (10YR 6/6) mottles; moderate coarse subangular blocky structure; firm; common medium and fine roots; few faint clay films on faces of peds; common feldspars; common fine and medium flakes of mica; very strongly acid; clear wavy boundary.

BC—28 to 34 inches; strong brown (7,5YR 5/8) sandy clay loam; common medium distinct yellowish brown (10YR 6/6) and light yellowish brown (10YR 6/4) mottles; weak coarse subangular blocky structure; very strongly acid; clear irregular boundary.

C1—34 to 50 inches; variegated sandy loam saprolite weathered from granite gneiss; rock structure of parent material controls structure; friable; very strongly acid; gradual wavy boundary.

C2—50 to 80 inches; variegated sandy loam saprolite weathered from diorite gneiss; rock structure of parent material controls structure; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to more than 40 inches
Depth to bedrock: More than 80 inches
Content of rock fragments: 0 to 15 percent in the solum
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8
Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or loam

BE horizon (where present):
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma of 3 to 8
Texture—sandy clay loam, clay loam, or loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma 4 to 8
Texture—sandy clay, clay loam, or clay
Mottles—shades of red, yellow, and brown

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy clay loam, clay loam, or loam
Mottles—shades of yellow and brown

C horizon:
Color—variegated in shades of red, brown, and yellow
Texture—loamy saprolite from highly weathered gneiss or schist

Wehadkee Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Loamy recent alluvium
Landscape: Piedmont
Landform: Flood plains
Landform position: Linear to slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, mixed, active, nonacid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

- The somewhat poorly drained Cartecay and Chewacla soils in the slightly higher and more level positions than the Wehadkee soils
- The fine-loamy Toccoa soils on levees

Typical Pedon

Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded; in Coosa County, Alabama, about 3.4 miles southeast of Goodwater; 200 feet north and 1,400 feet west of the southeast corner of section 35, T. 24 N., R. 20 E.; USGS Goodwater topographic quadrangle; lat. 33 degrees 04 minutes 01 seconds N. and long. 86 degrees 01 minute 49 seconds W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; friable; many fine, medium, and coarse roots; common medium distinct dark yellowish brown (10YR 4/4) root stains; strongly acid; clear smooth boundary.

Bg—4 to 20 inches; gray (10YR 5/1) loam; weak fine subangular blocky structure; friable; many fine, medium, and coarse roots; many distinct dark yellowish brown (10YR 4/4) masses of oxidized iron along root channels; strongly acid; abrupt smooth boundary.

Cg1—20 to 40 inches; gray (10YR 5/1) stratified sandy loam and loam; massive; friable; common fine, medium, and coarse roots; common medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron along root channels; strongly acid; clear wavy boundary.

Cg2—40 to 80 inches; dark gray (10YR 4/1) sandy loam; massive; friable; common medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron along root channels; strongly acid; clear wavy boundary.

Range in Characteristics

Thickness of the solum: 20 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: Few to common
Content of concretions: None to common; mostly manganese
Content of rock fragments: 0 to 15 percent
Reaction: Strongly acid to neutral throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 0 to 4
Texture—silt loam or fine sandy loam

Bg horizon:
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma 0 to 2
Texture—silt loam, loam, silty clay loam, sandy clay loam, or clay loam
Redoximorphic features—iron depletions in shades of gray and masses of oxidized iron in shades of red, brown, and yellow

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 0 to 2
Texture—variable; commonly sandy loam, loam, silt loam, sandy clay loam, or clay loam
Redoximorphic features—masses of oxidized iron in shades of red, brown, and yellow and iron depletions in shades of gray

Wickham Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Fluvial sediments
Landscape: Piedmont
Landform: Stream terraces
Landform position: Linear to slightly convex slopes
Slope: 0 to 6 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Buncombe soils, which are in the more undulating positions on levees and have a sandy control section
- The somewhat poorly drained Chewacla and Cartecay soils in the lower positions
- Toccoa soils, which are in the slightly lower positions and lack a developed subsoil

Typical Pedon

Wickham sandy loam, 2 to 6 percent slopes, rarely flooded; in Tallapoosa County, Alabama, about 1.9 miles south of Daviston; 950 feet south and 1,700 feet east of the northwest corner of section 11, T. 23 N., R. 24 E.; USGS Wadley South topographic quadrangle; lat. 33 degrees 00 minute 08 seconds N. and long. 85 degrees 37 minutes 21 seconds W.

Ap1—0 to 4 inches; dark brown (10YR 4/4) loam; weak medium granular structure; friable; many fine and medium roots; few fine flakes of mica; strongly acid; abrupt smooth boundary.

Ap2—4 to 10 inches; dark brown (10YR 4/4) loam; moderate medium granular structure; friable; many fine and medium roots; few fine flakes of mica; strongly acid; abrupt smooth boundary.
Bt1—10 to 20 inches; yellowish red (7.5YR 5/6) sandy clay loam; strong medium subangular blocky structure; friable; common fine and medium roots; common distinct clay films on faces of peds; few fine flakes of mica; strongly acid; gradual wavy boundary.
Bt2—20 to 32 inches; yellowish red (5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; common fine flakes of mica; very strongly acid; gradual wavy boundary.
Bt3—32 to 43 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; common fine flakes of mica; very strongly acid; gradual wavy boundary.
Bt4—43 to 58 inches; yellowish red (5YR 5/8) sandy loam; weak medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; common fine flakes of mica; very strongly acid; gradual wavy boundary.
BC—58 to 74 inches; strong brown (7.5YR 5/6) fine sandy loam; weak medium and fine subangular blocky structure; friable; few fine roots; common fine and medium flakes of mica; firm; very strongly acid; clear wavy boundary.
C—74 to 80 inches; brownish yellow (10YR 6/8) loamy fine sand; massive; loose; common fine black accumulations; very strongly acid.

Range in Characteristics

Thickness of the solum: 36 to more than 60 inches
Content of mica flakes: Few to many
Content and size of rock fragments: 0 to 10 percent; mostly rounded gravel
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap or A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 8
Texture—fine sandy loam, sandy loam, or loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 6 to 8
Texture—fine sandy loam, sandy loam, or loam

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam, loam, or clay loam

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay loam to loamy sand and sand

Wilkes Series

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Mafic crystalline rock
Landscape: Piedmont
Landform: Narrow ridges and hillslopes

Landform position: Summits and side slopes
Slope: 6 to 30 percent
Taxonomic class: Loamy, mixed, active, thermic, shallow Typic Hapludalfs (fig. 13)

Commonly Associated Soils

- Mecklenburg soils, which are in the higher and more level positions on ridges and have a red subsoil
- Winnsboro soils, which are in the lower, more level positions on shoulders and side slopes and are deep to bedrock
- Wynott soils, which are in positions similar to those of the Wilkes soils and are moderately deep to bedrock

Typical Pedon

Wilkes gravelly loam, in an area of Wynott-Wilkes complex, 15 to 45 percent slopes, very stony; in Tallapoosa County, Alabama, about 1.1 miles northeast of Ponders; 1,700 feet south and 1,875 feet west of the northwest corner of section 9, T. 20 N., R. 23 E.; USGS Dadeville topographic quadrangle; lat. 32 degrees 44 minutes 08 seconds N. and long. 85 degrees 45 minutes 22 seconds W.

A—0 to 4 inches; dark grayish brown (2.5Y 4/2) gravelly sandy loam; weak fine granular structure; very friable; common fine, medium, and coarse roots; 25 percent angular gravel; strongly acid; clear wavy boundary.

BE—4 to 9 inches; olive (5Y 5/3) gravelly sandy loam; weak fine granular structure; very friable; common fine and medium roots; 20 percent angular gravel; moderately acid; clear wavy boundary.

Figure 13.—A profile of a Wilkes soil. Wilkes soils formed in residuum weathered from mafic crystalline rock. These shallow, well drained soils have a dark surface layer, which indicates the presence of a significant amount of organic material.

Bt—9 to 15 inches; yellowish brown (10YR 5/6) clay; moderate medium subangular blocky structure; firm; common fine and medium and few coarse roots; common clay films on faces of peds; slightly acid; abrupt irregular boundary.
Cr—15 to 80 inches; yellowish brown, strong brown, green, black, and brown saprolite from highly weathered mafic rock; subangular blocky rock structure; red (2.5YR 4/8) loam in fractures.

Range in Characteristics

Thickness of the solum: 10 to 20 inches
Depth to bedrock: 10 to 20 inches
Content and size of rock fragments: 0 to 50 percent in the A, E, and BE horizons and 0 to 35 percent in the B horizon; mostly gravel or cobbles
Reaction: Strongly acid to slightly alkaline throughout

Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 6
Texture—sandy loam or loam or their gravelly analogues

E or BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 8
Texture—gravelly sandy loam

Bt horizon:
Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—loam, sandy clay loam, clay loam, or clay

C horizon (where present):
Color—variegated in shades of black, green, brown, and gray
Texture—loam, fine sandy loam, or sandy loam

Cr layer:
Type of bedrock—weathered intermediate or mafic crystalline rock that can be dug with difficulty with hand tools

Winnsboro Series

Depth class: Deep
Drainage class: Well drained
Permeability: Slow
Parent material: Mafic crystalline rock
Landscape: Piedmont
Landform: Narrow ridges and hillslopes
Landform position: Convex shoulders and side slopes
Slope: 6 to 15 percent
Taxonomic class: Fine, mixed, active, thermic Typic Hapludalfs (fig. 14)

Commonly Associated Soils

- Mecklenburg soils, which are in the higher, more level positions on ridges and have a red subsoil
- Wilkes soils, which are in the more convex positions on shoulders and are deep to bedrock
- Wynott soils, which are in positions similar to those of the Winnsboro soils and are moderately deep to bedrock

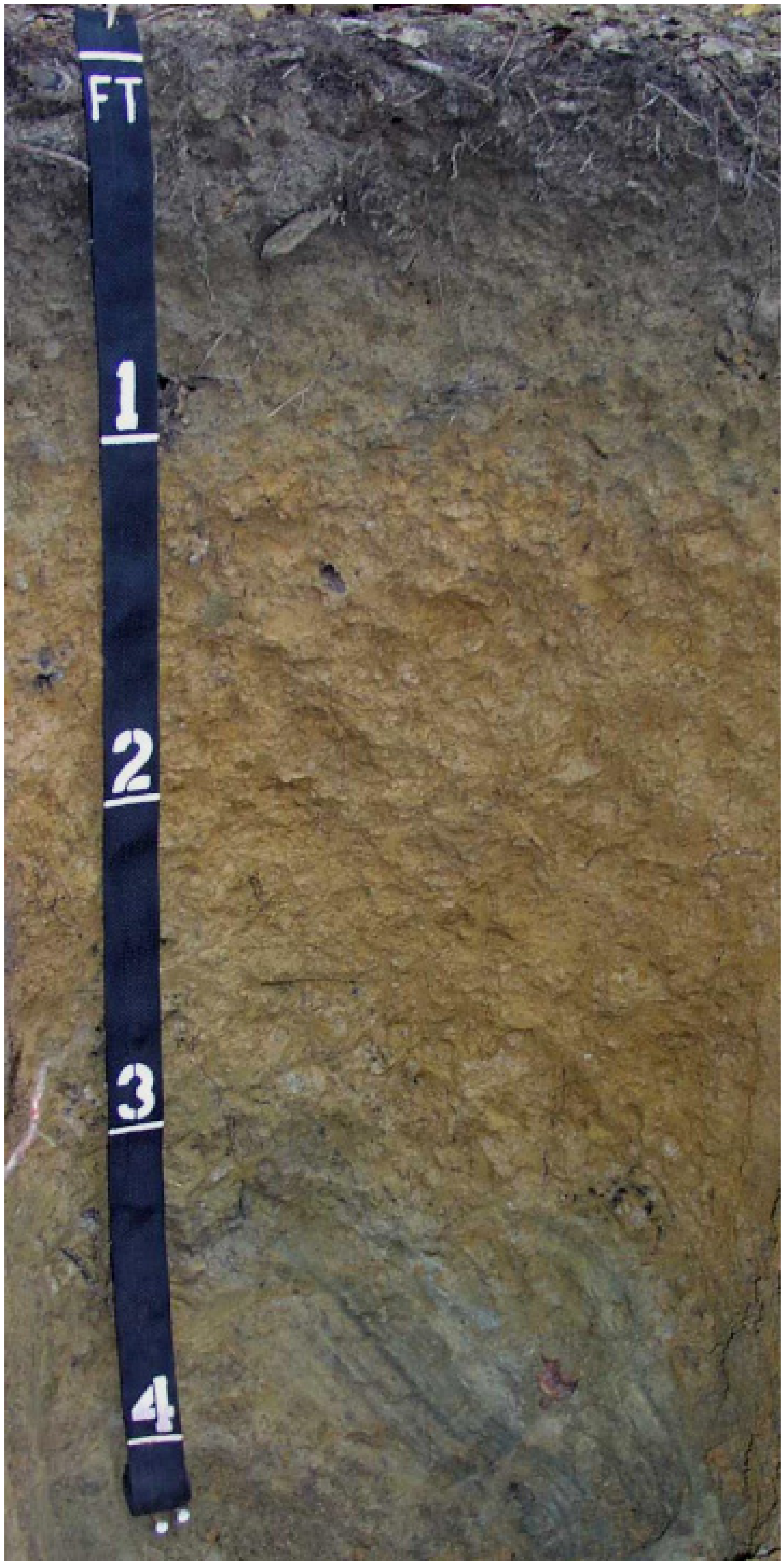

Figure 14.—A profile of a Winnsboro soil. Winnsboro soils formed in residuum weathered from mafic crystalline rock. These deep, well drained soils have tilted, soft cloritic schist bedrock at a depth of 40 to 60 inches.

Typical Pedon

Winnsboro very gravelly sandy loam, in an area of Wynott-Winnsboro complex, 6 to 15 percent slopes, very stony; in Tallapoosa County, Alabama, about 2.0 miles northeast of Alabama Highway 50; 1,200 feet north and 1,600 feet west of the southeast corner of section 13, T. 20 N., R. 22 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 42 minutes 53 seconds N. and long. 85 degrees 48 minutes 19 seconds W.

A—0 to 6 inches; brown (10YR 4/3) very gravelly sandy loam; moderate fine granular structure; very friable; common medium and few coarse roots; about 45 percent angular gravel and about 5 percent cobbles; moderately acid; clear smooth boundary.

BE—6 to12 inches; brown (10YR 5/4) gravelly sandy clay loam; moderate fine subangular blocky structure; friable; common fine and medium roots; about 15 percent angular gravel; moderately acid; clear wavy boundary.

Bt—12 to 32 inches; strong brown (7.5YR 5/6) clay; moderate medium subangular blocky structure; firm; common fine and few medium roots; common clay films on faces of peds; slightly acid; gradual wavy boundary.

BC—32 to 40 inches; about 60 percent yellowish brown (10YR 5/8) and about 40 percent light olive brown (2.5Y 5/3) clay loam; weak medium subangular blocky structure; firm; few clay films on faces of peds; neutral; clear smooth boundary.

C—40 to 56 inches; light olive brown (2.5Y 5/6) sandy clay loam; massive; friable; common medium iron-manganese concentrations; neutral; abrupt irregular boundary.

Cr—56 to 80 inches; variegated grayish green (5G 4/2) and white (10YR 8/1) highly weathered mafic rock that crushes to sandy loam; can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 40 to 60 inches

Depth to bedrock: Soft bedrock at a depth of 40 to 60 inches and hard bedrock at a depth of more than 60 inches

Content and size of rock fragments: 15 to 35 percent in the A, E, and BE horizons and 0 to 35 percent in the B horizon; mostly gravel or cobbles

Reaction: Strongly acid to slightly acid in the A horizon and slightly acid to mildly alkaline in the B and C horizons

A or Ap horizon:

Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4

Texture—fine sandy loam or sandy loam or their very gravelly analogues

E or BE horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 8

Texture—loam, silt loam, sandy loam, or sandy clay loam

Bt horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—clay loam or clay

BC horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy clay loam, clay loam, or loam

C horizon:

Color—variegated in shades of brown, yellow, black, and white

Texture—sandy loam, loam, or silt loam in the fine-earth fraction

Cr layer:

Type of bedrock—weathered intermediate or mafic crystalline rock that can be dug with difficulty with hand tools

Wynott Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Parent material: Mafic crystalline rock
Landscape: Piedmont
Landform: Narrow ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 30 percent
Taxonomic class: Fine, mixed, active, thermic Typic Hapludalfs

Commonly Associated Soils

- Mecklenburg soils, which are in the higher and more level positions on ridges and have a red subsoil
- Winnsboro soils, which are in positions similar to those of the Wynott soils and are deep to bedrock
- Wilkes soils, which are in the more convex positions on shoulders and are shallow to bedrock

Typical Pedon

Wynott gravelly sandy loam, in an area of Enon-Wynott complex, 2 to 6 percent slopes; in Tallapoosa County, Alabama, about 2.0 miles northeast of Alabama Highway 50; 1,500 feet north and 1,300 feet west of the southeast corner of section 13, T. 20 N., R. 22 E.; USGS Ponders topographic quadrangle; lat. 32 degrees 42 minutes 53.7 seconds N. and long. 85 degrees 48 minutes 17.4 seconds W.

A—0 to 8 inches; brown (10YR 4/3) gravelly sandy loam; weak fine granular structure; very friable; common fine, medium, and coarse roots; 25 percent angular gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

BE—8 to 12 inches; light olive brown (2.5Y 5/3) gravelly sandy loam; moderate medium granular structure; very friable; common fine and medium roots; 15 percent angular gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

Bt—12 to 23 inches; yellowish brown (10YR 5/6) clay; strong medium subangular blocky structure; firm; common fine and medium and few coarse roots; common clay films on faces of peds; slightly acid; gradual wavy boundary.

Bt2—23 to 32 inches; yellowish brown (10YR 5/6) clay; moderate medium subangular blocky structure; firm; common fine and medium and few coarse roots; common clay films on faces of peds; slightly acid; gradual wavy boundary.

BC—32 to 38 inches; variegated yellowish brown (10YR 5/8), brownish yellow (10YR 6/6), white (10YR 8/1), and strong brown (7.5YR 5/6) clay loam; weak course subangular blocky structure; friable; few medium roots; pockets of clay and loam; few clay films on faces of peds; slightly acid; abrupt irregular boundary.

Cr—38 to 80 inches; variegated grayish green (5G 4/2) and white (10YR 8/1) highly weathered mafic rock; can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: Soft bedrock at a depth of 20 to 40 inches and hard bedrock at a depth of 40 to more than 60 inches

Content and size of rock fragments: 0 to 35 percent in the A, E, and BE horizons and 0 to 35 percent in the B horizon; mostly gravel or cobbles

Reaction: Very strongly acid to slightly acid throughout, except where lime has been applied

Ap or A horizon:

Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8

Texture—fine sandy loam or sandy loam or their gravelly analogues

E horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture—loam, silt loam, sandy loam, or fine sandy loam

BE or EB horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture—loam, sandy loam, or sandy clay loam

Bt horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—clay loam, silty clay, sandy clay, or clay

BC horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay, sandy clay loam, clay loam, or loam

C horizon (where present):

Color—variegated in shades of brown, yellow, black, and white

Texture—variable; commonly sandy loam, loam, or silt loam

Cr layer:

Type of bedrock—weathered intermediate or mafic crystalline rock that can be dug with difficulty with hand tools

Formation of the Soils

In this section, the factors of soil formation are related to the soils in Tallapoosa County and the processes of horizon differentiation are explained.

Factors of Soil Formation

Soil is a natural, three-dimensional body on the earth's surface that supports plants. Soil forms through weathering and other processes that act on deposited or accumulated geologic material. The kind of soil that forms depends on the type of parent material; the climate under which soil material has existed since accumulation; the relief, or lay of the land; the plant and animal life in and on the soil; and the length of time that the forces of soil formation have acted on the soil material. The relative importance of each of these factors differs from place to place; in some areas one factor is more important, and in other areas another factor may dominate. A modification or variation in any of the factors results in a different kind of soil (Jenny, 1941; Buol and others, 1980).

Climate and living organisms are the active factors of soil formation. They act on parent material and change it into a natural body that has definite characteristics. The effects of climate and living organisms are conditioned by relief, which influences surface drainage, the amount of water that percolates through the soil, the rate of erosion, and the kind of vegetation that grows on the soil. The nature of the parent material also affects the kind of soil profile that is formed. Time is needed for the parent material to change into a soil. The development of a distinct soil horizon normally requires a long period of time.

Parent Material

Parent material is the initial physical body that is changed by the other soil-forming factors over time. Generally, the younger the soil, the greater the influence of the parent material on soil properties. The nature of the parent material can be expressed in many ways in the soil profile, including color, texture, and mineralogy. These properties can be related to physical and chemical properties, such as susceptibility to erosion, shrink-swell potential, and cation-exchange capacity.

The soils in Tallapoosa County formed mainly in five kinds of parent material: materials weathered from acid crystalline rocks, materials weathered from basic crystalline rocks, materials weathered from phyllite or sericite schist, loamy and clayey marine sediments that have undergone considerable weathering in place, and water-deposited material on stream terraces and flood plains (Neatherly and Bentley, 1971).

The Elkahatchee Quartz Diorite Gneiss (fig. 15), the Zana Granite, and the Kowaliga Gneiss are formations in the northern part of the county that are made up of acid crystalline rocks. Soils weathered from these rocks include the Cecil, Hard Labor, Louisburg, Pacolet, Rion, Saw, and Wedowee soils. Another formation, which is also in the northern part of the county and consists of acid crystalline rocks, is the Emuckfaw Group, which is a schist formation that is in a diagonal band from southwest to northeast. Soils that formed in material weathered from these rocks include the Louisa and Madison soils.

Figure 15.—A vertical exposure of granite diorite. Soils derived from the residuum weathered from this rock include the Cecil, Louisburg, Pacolet, Saw, and Wedowee soils.

The Dadeville Complex, in the eastern part of the county, is made up of basic crystalline rocks and includes formations such as the Agricola Schist, the Ropes Creek Amphibolite, the Waresville Schist, the Waverly Gneiss, the Camp Hill Granite Gneiss, and the Rock Mill Granite Gneiss. Agricola, Enon, Lloyd, Mecklenburg, Wilkes, Winnsboro, and Wynott soils formed in material weathered from these basic crystalline rocks.

The Jackson Gap Group and the Wedowee Group, which are in the northern part of the county, are made up of phyllite and sericite schist and include formations such as the Wedowee Group, undifferentiated, the Hackneyville Schist, and the Cornhouse Schist. Badin, Fruithurst, Tallapoosa, and Tatum soils formed in material weathered from phyllite or sericite schist.

Marine sediments of the Tuscaloosa Group, undifferentiated, which are in the extreme southern part of the county, consist of light gray to reddish orange, clayey and gravelly fine to very coarse sand that is interbedded with varicolored sandy clay and local thin beds of indurated sandstone. Cowarts, Greenville, Marvyn, Springhill, and Uchee soils formed in weathered loamy and clayey marine sediments.

Alluvial deposits of recent age and low terrace deposits of Holocene age are along the Tallapoosa River and major creeks and in stream valleys throughout the county. Altavista, Eunola, Hiwassee, and Wickham soils formed in water-deposited material on stream terraces. Buncombe, Cartecay, Chewacla, Iuka, Kinston, and Wehadkee soils formed in water-deposited material on flood plains.

Climate

The climate of Tallapoosa County is warm and humid. Summers are long and hot. Winters are short and mild, and the ground rarely freezes to a depth of more than a few inches. The climate is fairly even throughout the county and accounts for few differences between the soils. Rainfall averages about 52 inches a year. Detailed information about the climate in the county is given in the section “General Nature of the County” and in the tables “Temperature and Precipitation,” “Freeze Dates in Spring and Fall,” and “Growing Season.”

The mild, humid climate favors rapid decomposition of organic matter and increases the rate of chemical reactions in the soil. The plentiful rainfall leaches large amounts of soluble bases and carries the less soluble fine particles downward, which results in acid soils that have a sandy surface layer and that are low in natural fertility. The large amount of moisture and the warm temperature favor the growth of bacteria and fungi and speed the decomposition of organic matter, which results in soils that have a low content of organic matter.

Relief

Relief varies significantly in Tallapoosa County and generally can be related to the physiographic regions and geologic units in the county. It ranges from very low on the flood plains and stream terraces to very high in the dissected hills.

Relief influences the formation of soil through its effects on drainage, runoff, and erosion. Soil properties that are influenced by relief include the thickness of the solum, the thickness of the A horizon, the color of the profile, the degree of horizon differentiation, and the relative wetness of the profile. The thickness of the solum is one of the properties most obviously related to relief. Soils on nearly level summits tend to have a thicker solum than that of soils on steep side slopes.

Relief also affects moisture relationships in soil. It affects the depth to ground water and the amount of water that is available for plant growth. Generally, the water table is closer to the surface in depressions than on the high parts of the landscape.

Plants and Animals

Living organisms greatly influence the processes of soil formation and the characteristics of the soils. Trees, grasses, insects, earthworms, rodents, fungi, bacteria, and other forms of plant and animal life are affected by the other soil-forming factors. Animal activity is largely confined to the surface layer of the soil. The soil is continually mixed by the activity of animals, which improves water infiltration. Plant roots create channels through which air and water move more rapidly, thereby improving soil structure and increasing the rate of chemical reactions in the soil.

Micro-organisms help to decompose organic matter, which releases plant nutrients and chemicals into the soil. These nutrients are either used by the plants or are leached from the soil. Human activities that influence plant and animal populations in the soil affect the rate of soil formation.

The native vegetation in Tallapoosa County consisted dominantly of loblolly-shortleaf pine and oak-pine forest types in the uplands and oak-hickory and oak-gum forest types in the bottom lands. The understory species consisted of numerous species, including holly, panicums, bluestems, American beautyberry, Indiangrass, longleaf uniola, and flowering dogwood. These species represent only a very limited number of the wide variety of plants native to the county, but they can be used as a guide to plants presently in the county.

The plant communities in the county are also reflected in the species distribution of fauna. Animals, in turn, have an impact on the soil properties of a particular area. For

example, ants, worms, moles, armadillos, and gophers can improve aeration in a compacted soil. Microbes that thrive in a particular plant community react to various soil conditions and consequently influence the soil profile by providing decayed organic matter and nitrogen to the soil matrix.

Time

If all other factors of soil formation are equal, the degree of soil formation is in direct proportion to time. If soil-forming factors have been active for a long time, horizon development is stronger than if these same factors have been active for a relatively short time.

Some parent materials are more easily weathered than others. The rate of weathering is dependent on the mineral composition and the degree of consolidation of the parent material. “Time zero” for soil formation is considered to be that point in time when fresh parent material is first exposed to the other soil-forming factors. Commonly, this is a catastrophic occurrence, such as a flood, a change in topography resulting from a geologic event, a severe episode of erosion, or the influence of humans on the landscape.

Geologically, the soils in Tallapoosa County are relatively old. The youngest soils are the alluvial soils on active flood plains along streams and rivers. These soils receive deposits of sediment and are undergoing a cumulative soil-forming process. In most cases, these young soils have weakly defined horizons, mainly because the soil-forming processes have been active for only a short time. Buncombe, Cartecay, Chewacla, Iuka, Kinston, Toccoa, and Wehadkee soils are examples of young soils.

Soils on terraces along the Tallapoosa River and other major streams are older than soils on flood plains but are still relatively young. Although they formed in material deposited by the river, these soils are no longer reached by frequent overflows because the river channel is now deeper. Many of these soils have relatively strong horizon development. Altavista, Eunola, Hiwassee, and Wickham soils are examples of soils on stream terraces that have varying ages and elevations.

Soils on uplands generally are older than soils on terraces or flood plains and range in age from old to very old. The degree of soil development depends on landscape position and composition of the parent material. Agricola, Cecil, Fruithurst, Madison, and Pacolet soils are examples of soils on uplands.

Processes of Horizon Differentiation

The main processes involved in the formation of soil horizons are accumulation of organic matter, leaching of calcium carbonate and other bases, reduction and transfer of iron, and formation and translocation of silicate clay minerals. These processes can occur in combination or individually, depending on the integration of the factors of soil formation.

Most soils have four main horizons. The A horizon is the surface layer. It is the horizon of maximum accumulation of organic matter. It commonly is darker than horizons below it because of the influence of the organic matter. Organic matter has accumulated to form an A horizon in all of the soils in the county. The content of organic matter varies between soils because of differences in relief, wetness, and natural fertility.

The E horizon, usually called the subsurface layer, occurs in many of the soils in the county, especially those soils on uplands. It is the horizon of maximum loss of soluble or suspended material. It commonly is lighter in color and coarser in texture than the overlying and underlying horizons. Louisburg and Pacolet soils have both an A horizon and an E horizon. Other soils have an A horizon but do not have an E horizon. Examples are Chewacla, Cartecay, and Wehadkee soils.

The B horizon, which is usually called the subsoil, is immediately below the A or E horizon. It is the horizon of maximum accumulation of dissolved or suspended material, such as iron or clay. Soils on old, stable landforms generally have a thick, well structured B horizon. Examples are Cecil, Greenville, and Madison soils. Soils on flood plains either do not have a B horizon or have a weakly developed B horizon. Examples are Buncombe, Iuka, and Kinston soils.

The C horizon is the substratum. It has been affected very little by the soil forming processes, but it may be somewhat modified by weathering.

The chemical reduction and transfer of iron, called gleying, is evident in the wet soils in the county. Gleying results in gray colors in the subsoil and other horizons. The gray colors indicate the reduction and loss of iron and manganese. The horizons of some soils, such as Altavista and Eunola soils, have reddish and brownish redoximorphic features, which indicate a segregation of iron.

Leaching of carbonates and bases has occurred in most of the soils in the county. This process contributes to the development of distinct horizons and to the naturally low fertility and acid reaction of most soils in the Piedmont and Coastal Plain.

In uniform materials, natural drainage generally is closely associated with slope or relief. It generally affects the color of the soil. Soils that formed under good drainage conditions have a subsoil that is uniformly bright in color. Pacolet, Rion, and Marvyn soils are examples. Soils that formed under poor drainage conditions have grayish colors. Kinston and Wehadkee soils are examples. Soils that formed where drainage is intermediate have a subsoil that is mottled in shades of gray, red, and brown. Altavista, Eunola, and Hard Labor soils are examples. The grayish colors persist even if artificial drainage is provided. The dark grayish brown colors in the upper part of the Kinston soils and the olive mottles in the Wehadkee soils are assumed to be inherited from the parent material.

In steep areas, the surface soil erodes. In low areas and in depressions, soil materials commonly accumulate and add to the thickness of the surface layer. In some areas, the rate of formation of soil materials and the rate of removal of soil materials are in equilibrium. The eluviation of clay from the E horizon to the Bt horizon is also related to the degree of relief.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at

neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given

instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Ksat. See Saturated hydraulic conductivity.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume

change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

Permeability. See also Saturated hydraulic conductivity. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat). The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the

relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are *very high*, 100 or more micrometers per second (14.17 or more inches per hour); *high*, 10 to 100 micrometers per second (1.417 to 14.17 inches per hour); *moderately high*, 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour); *moderately low*, 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour); *low*, 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour); and *very low*, less than 0.01 micrometer per second (less than 0.001417 inch per hour). To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small, streamlined dune that forms around brush and clump vegetation.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a

slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 1 percent
Nearly level	0 to 2 percent
Very gently sloping	1 to 3 percent
Gently sloping	2 to 5 percent
Moderately sloping	5 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Temperature and Precipitation

(Recorded in the period 1971-2000 at Milstead, Alabama)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Av sn
	°F	°F	°F	°F	°F	Units	In	In	In		
January-----	56.9	34.1	45.5	77	11	56	5.20	3.39	6.84	7	
February----	61.8	37.2	49.5	81	16	103	5.02	3.18	6.70	6	
March-------	69.1	42.9	56.0	85	22	226	6.52	4.01	8.78	7	
April-------	75.6	48.8	62.2	88	31	374	4.32	2.00	6.31	5	
May---------	83.3	58.2	70.8	94	42	636	3.90	1.98	5.58	6	
June--------	88.9	66.4	77.7	99	52	819	4.08	1.89	5.97	6	
July--------	92.2	70.3	81.3	102	62	936	4.52	2.27	6.48	7	
August------	91.4	68.9	80.1	101	59	881	3.24	1.79	4.53	6	
September---	86.7	62.8	74.8	98	44	734	3.86	2.21	5.33	5	
October-----	77.2	50.7	63.9	91	32	424	2.76	0.94	4.26	3	
November----	68.5	42.7	55.6	85	24	210	4.44	2.32	6.30	5	
December----	59.2	36.6	47.9	79	16	96	4.60	2.98	6.08	6	
Yearly:											
Average---	75.9	51.6	63.8	---	---	---	---	---	---	---	
Extreme---	106	-3	---	103	9	---	---	---	---	---	
Total-----	---	---	---	---	---	5495	52.48	35.35	57.93	69	

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding t
maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below whic

Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Milstead, Alabama)

Probability	Temperature 24 °F or lower	Temperature 28 °F or lower	Temperature 32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Mar. 11	Mar. 19	Apr. 9
2 year in 10 later than--	Mar. 2	Mar. 14	Apr. 3
5 year in 10 later than--	Feb. 14	Mar. 3	Mar. 22
First freezing temperature in fall:			
1 yr in 10 earlier than--	Nov. 14	Nov. 5	Oct. 22
2 yr in 10 earlier than--	Nov. 26	Nov. 12	Oct. 27
5 yr in 10 earlier than--	Dec. 19	Nov. 25	Nov. 6

Growing Season

(Recorded for the period 1971-2000 at Milstead, AL)

Probability	Daily minimum temperature during growing season: Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	264	240	208
8 years in 10	279	249	214
5 years in 10	309	266	227
2 years in 10	339	283	241
1 year in 10	354	292	247

Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AlA	Altavista silt loam, 0 to 2 percent slopes, rarely flooded	130	*
AtB	Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded	460	*
BdB2	Badin-Tatum-Tallapoosa complex, 2 to 6 percent slopes, moderately eroded	2,905	0.6
BfC	Badin-Tallapoosa-Fruithurst complex, 3 to 10 percent slopes	5,780	1.2
BuA	Buncombe loamy sand, 0 to 2 percent slopes, frequently flooded	170	*
CdB	Cecil-Urban land complex, 2 to 6 percent slopes	1,395	0.3
CeB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	8,955	1.8
CeC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	12,665	2.6
CHA	Chewacla, Cartecay, and Toccoa soils, 0 to 1 percent slopes, frequently flooded	32,215	6.6
CoB	Cowarts loamy sand, 2 to 5 percent slopes	2,084	0.4
CoC	Cowarts loamy sand, 5 to 8 percent slopes	5,490	1.1
CrD	Cowarts gravelly sandy loam, 8 to 15 percent slopes	6,270	1.3
CwE	Cowarts-Uchee complex, 15 to 25 percent slopes	2,133	0.4
DAM	Dam	15	*
EnB	Enon-Wynott complex, 2 to 6 percent slopes	730	0.1
EuA	Eunola sandy loam, 0 to 2 percent slopes	400	*
FaA	Fluvaquents, 0 to 1 percent slopes, ponded	140	*
GrA	Greenville sandy loam, 0 to 2 percent slopes	420	*
GrB	Greenville sandy loam, 2 to 5 percent slopes	1,710	0.3
GuB	Greenville-Urban land complex, 0 to 5 percent slopes	305	*
GvD2	Gwinnett-Lloyd complex, 6 to 15 percent slopes, moderately eroded	37,525	7.7
GwE2	Gwinnett-Agricola complex, 15 to 25 percent slopes, moderately eroded	22,630	4.6
HdB	Hard Labor loamy sand, 2 to 6 percent slopes	5,035	1.0
HdC	Hard Labor loamy sand, 6 to 10 percent slopes	8,560	1.7
HiB2	Hiwassee loam, 2 to 6 percent slopes, moderately eroded	616	0.1
KnA	Kinston-Iuka complex, 0 to 1 percent slopes, frequently flooded	1,300	0.3
LdB2	Lloyd loam, 2 to 6 percent slopes, moderately eroded	11,540	2.4
LnB	Lloyd-Urban land complex, 2 to 6 percent slopes	580	0.1
LoF	Louisa-Mountain Park complex, 30 to 50 percent slopes	1,398	0.3
LrD	Louisburg-Rion-Rock outcrop complex, 6 to 15 percent slopes, very bouldery	2,290	0.5
LrE	Louisburg-Rion-Rock outcrop complex, 15 to 35 percent slopes, very bouldery	2,730	0.6
MaB2	Madison fine sandy loam, 2 to 6 percent slopes, moderately eroded	10,643	2.2
MaD2	Madison fine sandy loam, 6 to 15 percent slopes, moderately eroded	31,247	6.4
MdE2	Madison-Louisa complex, 15 to 30 percent slopes, moderately eroded	31,930	6.5
MnA	Marvyn sandy loam, 0 to 2 percent slopes	64	*
MrB	Marvyn loamy sand, 2 to 5 percent slopes	4,750	1.0
MW	Miscellaneous water	25	*
MwB2	Mecklenburg gravelly sandy loam, 2 to 6 percent slopes, moderately eroded	6,570	1.3
MxD2	Mecklenburg gravelly loam, 6 to 15 percent slopes, moderately eroded	7,010	1.4
PaC2	Pacolet gravelly sandy loam, 3 to 10 percent slopes, moderately eroded	26,079	5.3
PrD2	Pacolet-Rion complex, 6 to 15 percent slopes, moderately eroded, stony	64,127	13.1
PrE2	Pacolet-Rion complex, 15 to 25 percent slopes, moderately eroded, stony	26,459	5.4
Pt	Pits, borrow	90	*
SgD	Springhill sandy loam, 5 to 15 percent slopes	732	0.1
TbD2	Tallapoosa-Badin-Fruithurst complex, 6 to 15 percent slopes, moderately eroded	17,788	3.6
TfE2	Tallapoosa-Fruithurst complex, 15 to 40 percent slopes, moderately eroded	21,570	4.4
ToA	Toccoa fine sandy loam, 0 to 2 percent slopes, occasionally flooded	2,930	0.6
Ur	Urban land	1,000	0.2
W	Water	28,780	5.9
WeC2	Wedowee gravelly sandy loam, 3 to 10 percent slopes, moderately eroded	3,510	0.7
WeD2	Wedowee gravelly sandy loam, 6 to 15 percent slopes, moderately eroded	10,850	2.2
WfE	Wedowee very gravelly sandy loam, 15 to 35 percent slopes	3,800	0.8
WgC	Wedowee-Saw complex, 2 to 10 percent slopes, very bouldery	575	0.1
WhA	Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded	6,040	1.2
WkA	Wickham sandy loam, 0 to 2 percent slopes, rarely flooded	455	*
WkB	Wickham sandy loam, 2 to 6 percent slopes, rarely flooded	870	0.2
WnD	Wynott-Winnsboro complex, 6 to 15 percent slopes, very stony	1,610	0.3
WyE	Wynott-Wilkes complex, 15 to 45 percent slopes, very stony	2,080	0.4
	Total	490,160	100.0

* Less than 0.1 percent.

Land Capability and Yields per Acre of Crops

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Corn	Cotton lint	Soybeans	Wheat
		Bu	Lbs	Bu	Bu
AlA:					
Altavista	2w	125.00	650.00	40.00	50.00
AlA:					
Altavista	2w	---	---	---	---
AtB:					
Altavista	2e	115.00	650.00	40.00	55.00
BdB2:					
Badin	3e	85.00	---	25.00	40.00
Tatum	3e				
Tallapoosa	3e				
BfC:					
Badin	3e	45.00	350.00	---	---
Tallapoosa	4e				
Fruithurst	3e				
BuA:					
Buncombe	5w	---	---	15.00	---
CdB:					
Cecil	2e	---	---	---	---
Urban land	8s				
CeB2:					
Cecil	2e	80.00	750.00	30.00	45.00
CeC2:					
Cecil	3e	65.00	700.00	25.00	40.00
CHA:					
Chewacla	4w	80.00	700.00	25.00	30.00
Cartecay	5w				
Toccoa	3w				
CoB:					
Cowarts	2e	80.00	650.00	35.00	---
CoC:					
Cowarts	3e	70.00	600.00	25.00	---
CrD:					
Cowarts	6e	60.00	500.00	20.00	---
CwE:					
Cowarts	7e	---	---	---	---
Uchee	6e				
DAM:					
Dam	---	---	---	---	---
EnB:					
Enon	2e	70.00	900.00	25.00	30.00
Wynott	3e				

Land Capability and Yields per Acre of Crops—Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Soybeans	Wheat
		Bu	Lbs	Bu	Bu
EuA:					
Eunola------------------	2w	100.00	650.00	35.00	55.00
FaA:					
Fluvaquents-------------	7w	---	---	---	---
GrA:					
Greenville--------------	1	100.00	825.00	40.00	---
GrB:					
Greenville--------------	2e	95.00	800.00	35.00	---
GuB:		---	---	---	---
Greenville--------------	2e	---	---	---	---
Urban land--------------	8s				
GvD2:					
Gwinnett----------------	4e	45.00	450.00	15.00	20.00
Lloyd-------------------	4e				
GwE2:					
Gwinnett----------------	6e	---	---	---	---
Agricola----------------	6e				
HdB:					
Hard Labor--------------	2e	90.00	650.00	35.00	45.00
HdC:					
Hard Labor--------------	3e	80.00	600.00	30.00	40.00
HiB2:					
Hiwassee----------------	3e	80.00	450.00	30.00	---
KnA:					
Kinston-----------------	6w	---	---	---	---
Iuka--------------------	5w				
LdB2:					
Lloyd-------------------	3e	100.00	550.00	30.00	---
LnB:					
Lloyd-------------------	3e	---	---	---	---
Urban land--------------	8s				
LoF:					
Louisa------------------	7e	---	---	---	---
Mountain Park-----------	7e				
LrD:					
Louisburg---------------	6s	---	---	---	---
Rion--------------------	4e				
Rock outcrop------------	8s				
LrE:					
Louisburg---------------	7s	---	---	---	---
Rion--------------------	7e				
Rock outcrop------------	8s				
MaB2:					
Madison-----------------	2e	80.00	700.00	---	---

Land Capability and Yields per Acre of Crops—Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Soybeans	Wheat
		Bu	Lbs	Bu	Bu
MaD2:					
Madison	4e	60.00	500.00	---	--
MdE2:					
Madison	7e	---	---	---	---
Louisa	7e				
MnA:					
Marvyn	1	75.00	800.00	35.00	50.00
MrB:					
Marvyn	2e	70.00	750.00	30.00	45.00
MwB2:					
Mecklenburg	2e	65.00	500.00	30.00	---
MxD2:					
Mecklenburg	4e	60.00	400.00	---	---
PaC2:					
Pacolet	3e	75.00	550.00	25.00	30.00
PrD2:					
Pacolet	4e	60.00	500.00	20.00	25.00
Rion	4e				
PrE2:					
Pacolet	6e	---	---	---	---
Rion	6e				
Pt:					
Pits	8s	---	---	---	---
SgD:					
Springhill	6e	75.00	400.00	25.00	35.00
TbD2:					
Tallapoosa	6e	60.00	---	20.00	30.00
Fruithurst	4e				
Badin	4e				
TfE2:					
Tallapoosa	7e	---	---	---	---
Fruithurst	7e				
ToA:					
Toccoa	2w	90.00	750.00	30.00	---
Ur:					
Urban land	8s	---	---	---	---
WeC2:					
Wedowee	3e	75.00	550.00	25.00	35.00
WeD2:					
Wedowee	4e	50.00	550.00	20.00	25.00
WfE:					
Wedowee	7e	---	---	---	---

Land Capability and Yields per Acre of Crops—Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Soybeans	Wheat
		Bu	Lbs	Bu	Bu
WgC:					
Wedowee	6s	---	---	---	---
Saw	6s				
WhA:					
Wehadkee	6w	---	---	---	---
WkA:					
Wickham	1	110.00	800.00	40.00	---
WkB:					
Wickham	2e	100.00	750.00	35.00	---
WnD:					
Wynott	6s	---	---	---	---
Winnsboro	6s				
WyE:					
Wynott	7s	---	---	---	---
Wilkes	7s				

Land Capability and Yields per Acre of Pasture and Hay

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Bahiagrass	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	AUM	Tons	AUM
AlA:					
Altavista	2w	9.00	8.50	4.50	8.50
AtB:					
Altavista	2e	9.00	8.50	4.50	8.50
BdB2:					
Badin	3e	---	7.00	3.50	6.50
Tatum	3e				
Tallapoosa	3e				
BdB2:					
Badin	3e	---	---	---	6.00
Tatum	3e				
Tallapoosa	3e				
BfC:					
Badin	3e	---	3.50	---	6.00
Tallapoosa	4e				
Fruithurst	3e				
BfC:					
Badin	3e	---	6.00	---	4.00
Tallapoosa	4e				
Fruithurst	3e				
BuA:					
Buncombe	5w	7.00	3.00	1.50	---
CdB:					
Cecil	2e	---	---	---	---
Urban land	8s				
CeB2:					
Cecil	2e	---	8.00	3.20	6.00
CeC2:					
Cecil	3e	---	7.50	3.00	5.50
CHA:					
Chewacla	4w	---	8.50	4.00	8.00
Cartecay	5w				
Toccoa	3w				
CoB:					
Cowarts	2e	7.00	8.00	4.00	---
CoC:					
Cowarts	3e	6.50	7.50	3.00	---
CrD:					
Cowarts	6e	6.50	6.50	3.50	---
CwE:					
Cowarts	7e	6.00	6.00	---	---
Uchee	6e				

Land Capability and Yields per Acre of Pasture and Hay—Continued

Map symbol and soil name	Land capability	Bahiagrass	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	AUM	Tons	AUM
DAM:					
Dam	---	---	---	---	---
EnB:					
Enon	2e	---	7.00	3.00	8.00
Wynott	3e				
EuA:					
Eunola	2w	9.00	8.50	4.50	8.50
FaA:					
Fluvaquents	7w	---	---	---	---
GrA:					
Greenville	1	11.00	11.00	6.00	8.50
GrB:					
Greenville	2e	11.00	11.00	6.00	8.50
GuB:					
Greenville	2e	---	---	---	---
Urban land	8s				
GvD2:					
Gwinnett	4e	---	7.50	4.00	5.00
Lloyd	4e				
GvD2:					
Gwinnett	4e	---	---	---	5.50
Lloyd	4e				
GwE2:					
Gwinnett	6e	---	---	---	---
Agricola	6e				
HdB:					
Hard Labor	2e	---	8.00	4.50	6.00
HdC:					
Hard Labor	3e	---	7.50	4.50	6.00
HiB2:					
Hiwassee	3e	---	8.50	3.50	6.00
KnA:					
Kinston	6w	8.00	8.00	40.00	---
Iuka	5w				
LdB2:					
Lloyd	3e	---	8.50	3.90	8.00
LnB:					
Lloyd	3e	---	---	---	---
Urban land	8s				
LoF:					
Louisa	7e	---	---	---	---
Mountain Park	7e				

Land Capability and Yields per Acre of Pasture and Hay—Continued

Map symbol and soil name	Land capability	Bahiagrass	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	AUM	Tons	AUM
LrD:					
Louisburg----------------	6s	---	---	---	3.00
Rion---------------------	4e				
Rock outcrop-------------	8s				
LrE:					
Louisburg----------------	7s	---	---	---	---
Rion---------------------	7e				
Rock outcrop-------------	8s				
MaB2:					
Madison------------------	2e	---	7.50	4.50	8.00
MaD2:					
Madison------------------	4e	---	6.00	3.60	---
MdE2:					
Madison------------------	7e	---	---	---	---
Louisa-------------------	7e				
MnA:					
Marvyn-------------------	1	10.00	10.00	4.50	---
MrB:					
Marvyn-------------------	2e	10.00	10.00	4.50	8.50
MwB2:					
Mecklenburg--------------	2e	---	5.50	3.30	4.50
MxD2:					
Mecklenburg--------------	4e	---	5.00	3.00	4.00
PaC2:					
Pacolet------------------	3e	---	6.50	---	6.00
PrD2:					
Pacolet------------------	4e	---	6.00	---	5.80
Rion---------------------	4e				
PrE2:					
Pacolet------------------	6e	---	---	---	---
Rion---------------------	6e				
Pt:					
Pits---------------------	8s	---	---	---	---
SgD:					
Springhill---------------	6e	7.50	8.50	3.00	8.50
TbD2:					
Tallapoosa---------------	6e	---	2.80	1.50	3.00
Fruithurst---------------	4e				
Badin--------------------	4e				
TfE2:					
Tallapoosa---------------	7e	---	---	---	---
Fruithurst---------------	7e				
ToA:					
Toccoa-------------------	2w	9.00	8.00	4.00	6.50

Land Capability and Yields per Acre of Pasture and Hay—Continued

Map symbol and soil name	Land capability	Bahiagrass	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	AUM	Tons	AUM
Ur:					
Urban land	8s	---	---	---	---
WeC2:					
Wedowee	3e	---	3.50	2.00	---
WeD2:					
Wedowee	4e	---	3.50	2.00	---
WfE:					
Wedowee	7e	---	---	---	---
WgC:					
Wedowee	6s	---	8.50	2.00	---
Saw	6s				
WhA:					
Wehadkee	6w	---	8.50	4.50	8.50
WkA:					
Wickham	1	---	8.50	4.50	--
WkB:					
Wickham	2e	---	8.50	4.50	---
WnD:					
Wynott	6s	---	6.00	---	6.00
Winnsboro	6s				
WyE:					
Wynott	7s	---	---	---	---
Wilkes	7s				

Prime Farmland

(Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland. If a soil is prime or important farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Map unit name	Farmland Classification
AlA	Altavista silt loam, 0 to 2 percent slopes, rarely flooded	Prime farmland in all areas
AtB	Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded	Prime farmland in all areas
CeB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	Prime farmland in all areas
CoB	Cowarts loamy sand, 2 to 5 percent slopes	Prime farmland in all areas
CoC	Cowarts loamy sand, 5 to 8 percent slopes	Prime farmland in all areas
EuA	Eunola sandy loam, 0 to 2 percent slopes	Prime farmland in all areas
GrA	Greenville sandy loam, 0 to 2 percent slopes	Prime farmland in all areas
GrB	Greenville sandy loam, 2 to 5 percent slopes	Prime farmland in all areas
HdB	Hard Labor loamy sand, 2 to 6 percent slopes	Prime farmland in all areas
HiB2	Hiwassee loam, 2 to 6 percent slopes, moderately eroded	Prime farmland in all areas
LdB2	Lloyd loam, 2 to 6 percent slopes, moderately eroded	Prime farmland in all areas
MaB2	Madison fine sandy loam, 2 to 6 percent slopes, moderately eroded	Prime farmland in all areas
MnA	Marvyn sandy loam, 0 to 2 percent slopes	Prime farmland in all areas
MrB	Marvyn loamy sand, 2 to 5 percent slopes	Prime farmland in all areas
MwB2	Mecklenburg gravelly sandy loam, 2 to 6 percent slopes, moderately eroded	Prime farmland in all areas
ToA	Toccoa fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Prime farmland in all areas
WkA	Wickham sandy loam, 0 to 2 percent slopes, rarely flooded	Prime farmland in all areas
WkB	Wickham sandy loam, 2 to 6 percent slopes, rarely flooded	Prime farmland in all areas

Forestland Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
AlA:				
Altavista	loblolly pine	90	129	loblolly pine
	longleaf pine	85	114	
	white oak	75	57	
	shortleaf pine	85	---	
	sweetgum	100	---	
	red maple	---	---	
	yellow-poplar	95	---	
	southern red oak	---	---	
	water oak	90	---	
	American beech	---	---	
	hickory	---	---	
AtB:				
Altavista	loblolly pine	90	129	loblolly pine
	longleaf pine	85	114	
	white oak	75	57	
	shortleaf pine	85	---	
	sweetgum	100	---	
	red maple	---	---	
	yellow-poplar	95	---	
	southern red oak	---	---	
	water oak	90	---	
	American beech	---	---	
	hickory	---	---	
BdB2:				
Badin	loblolly pine	80	110	loblolly pine, shortleaf pine
	shortleaf pine	70	106	
	Virginia pine	---	---	
	yellow-poplar	---	---	
	white oak	65	46	
	scarlet oak	65	47	
	chestnut oak	65	48	
Tatum	longleaf pine	60	---	Virginia pine, loblolly pine
	loblolly pine	80	110	
	shortleaf pine	70	106	
	Virginia pine	70	---	
Tallapoosa	Virginia pine	65	86	Virginia pine, loblolly pine
	loblolly pine	70	86	
	longleaf pine	55	43	
	shortleaf pine	65	86	
BfC:				
Badin	loblolly pine	80	110	loblolly pine, shortleaf pine
	shortleaf pine	70	106	
	Virginia pine	65	---	
	yellow-poplar	---	---	
	white oak	65	46	
	scarlet oak	65	47	
	chestnut oak	65	48	
Tallapoosa	Virginia pine	65	86	loblolly pine
	loblolly pine	70	86	
	longleaf pine	55	43	
	shortleaf pine	65	86	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Fruithurst	loblolly pine	75	86	loblolly pine, shortleaf pine
	longleaf pine	65	57	
	shortleaf pine	65	86	
BuA:				
Buncombe	American sycamore	---	---	American sycamore, loblolly pine, yellow-poplar
	elm	---	---	
	hickory	---	---	
	loblolly pine	90	129	
	northern red oak	---	---	
	river birch	---	---	
	southern red oak	---	---	
	sweetgum	---	---	
	yellow-poplar	95	114	
CdB:				
Cecil	loblolly pine	85	114	loblolly pine, shortleaf pine
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	80	57	
	northern red oak	80	57	
	southern red oak	80	57	
	post oak	70	57	
	scarlet oak	80	57	
	sweetgum	75	72	
	yellow-poplar	90	86	
Urban Land	---	---	---	---
CeB2:				
Cecil	loblolly pine	85	114	loblolly pine, shortleaf pine
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	80	57	
	northern red oak	80	57	
	southern red oak	80	57	
	post oak	70	57	
	scarlet oak	80	57	
	sweetgum	75	72	
	yellow-poplar	90	86	
CeC2:				
Cecil	loblolly pine	85	114	loblolly pine, shortleaf pine
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	80	57	
	northern red oak	80	57	
	southern red oak	80	57	
	post oak	70	57	
	scarlet oak	80	57	
	sweetgum	75	72	
	yellow-poplar	90	86	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
CHA:				
Chewacla	blackgum	---	---	American sycamore, loblolly pine, sweetgum, yellow-poplar
	eastern cottonwood	115	---	
	green ash	90	---	
	loblolly pine	95	143	
	red maple	---	---	
	southern red oak	---	---	
	sweetgum	110	129	
	water oak	105	72	
	willow oak	105	---	
	yellow-poplar	105	100	
Cartecay	loblolly pine	95	143	American sycamore, eastern cottonwood, loblolly pine, sweetgum, water oak, yellow-poplar
	southern red oak	85	72	
	sweetgum	100	114	
	water oak	95	86	
	yellow-poplar	105	114	
Toccoa	loblolly pine	105	129	American sycamore, cherrybark oak, loblolly pine, yellow-poplar
	southern red oak	85	---	
	sweetgum	110	143	
	yellow-poplar	115	114	
CoB:				
Cowarts	loblolly pine	85	129	loblolly pine, longleaf pine, slash pine
	longleaf pine	75	72	
	slash pine	85	157	
CoC:				
Cowarts	loblolly pine	85	129	loblolly pine, longleaf pine, slash pine
	longleaf pine	75	72	
	slash pine	85	157	
CrD:				
Cowarts	loblolly pine	85	114	loblolly pine, longleaf pine
	longleaf pine	75	86	
CwE:				
Cowarts	loblolly pine	85	129	loblolly pine, longleaf pine, slash pine
	longleaf pine	75	72	
	slash pine	85	157	
Uchee	loblolly pine	85	114	loblolly pine, slash pine
	longleaf pine	70	72	
	shortleaf pine	70	---	
DAM:				
Dam	---	---	---	---
EnB:				
Enon	loblolly pine	65	86	eastern redcedar, loblolly pine
	post oak	45	29	
	shortleaf pine	60	86	
	white oak	45	29	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Wynott	Virginia pine	60	100	loblolly pine, shortleaf pine
	loblolly pine	70	100	
	post oak	55	43	
	red maple	70	43	
	shortleaf pine	60	100	
	southern red oak	85	72	
	sweetgum	80	72	
	white oak	70	57	
	yellow-poplar	90	86	
EuA:				
Eunola	loblolly pine	95	143	loblolly pine, slash pine, sweetgum, yellow-poplar
	slash pine	95	172	
	sweetgum	95	114	
	yellow-poplar	95	100	
FaA:				
Fluvaquents	baldcypress	105	100	baldcypress, green ash
	swamp chestnut oak	80	---	
	water oak	80	---	
	yellow poplar	90	---	
GrA:				
Greenville	loblolly pine	85	114	loblolly pine, longleaf pine, slash pine
	longleaf pine	70	86	
	slash pine	85	143	
GrB:				
Greenville	loblolly pine	85	114	loblolly pine, longleaf pine, slash pine
	longleaf pine	70	86	
	slash pine	85	143	
GuB:				
Greenville	loblolly pine	85	114	loblolly pine, longleaf pine, slash pine
	longleaf pine	70	86	
	slash pine	85	143	
Urban Land	---	---	---	---
GvD2:				
Gwinnett	loblolly pine	80	114	loblolly pine, Virginia pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
Lloyd	loblolly pine	85	114	loblolly pine
	northern red oak	80	57	
	shortleaf pine	75	114	
	southern red oak	80	57	
	white oak	80	57	
	yellow-poplar	85	86	
GwE2:				
Gwinnett	loblolly pine	80	114	loblolly pine, Virginia pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
Agricola	loblolly pine	80	114	loblolly pine
	southern red oak	70	57	
	white oak	70	57	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
HdB:				
Hard Labor	hickory	---	---	loblolly pine
	loblolly pine	90	129	
	southern red oak	---	---	
	sweetgum	---	---	
	white oak	65	43	
	yellow-poplar	90	86	
HdC:				
Hard Labor	hickory	---	---	loblolly pine
	loblolly pine	90	129	
	southern red oak	---	---	
	sweetgum	---	---	
	white oak	65	43	
	yellow-poplar	90	86	
HiB2:				
Hiwassee	loblolly pine	90	100	loblolly pine, shortleaf pine
	northern red oak	---	57	
	shortleaf pine	80	100	
	southern red oak	85	57	
	white oak	80	57	
KnA:				
Kinston	cherrybark oak	90	57	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar
	eastern cottonwood	95	129	
	loblolly pine	90	129	
	sweetgum	85	114	
	white oak	90	57	
Iuka	eastern cottonwood	115	143	eastern cottonwood, loblolly pine, yellow-poplar
	loblolly pine	105	129	
	sweetgum	105	143	
	water oak	100	100	
LdB2:				
Lloyd	loblolly pine	85	114	loblolly pine, shortleaf pine
	northern red oak	80	57	
	shortleaf pine	75	114	
	southern red oak	80	57	
	white oak	80	57	
	yellow-poplar	85	86	
LnB:				
Lloyd	loblolly pine	85	114	loblolly pine, shortleaf pine
	northern red oak	80	57	
	shortleaf pine	75	114	
	southern red oak	80	57	
	white oak	80	57	
	yellow-poplar	85	86	
Urban Land	---	---	---	---

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
LoF:				
Louisa	loblolly pine	70	100	eastern redcedar, loblolly pine
	longleaf pine	65	72	
	shortleaf pine	65	100	
	southern red oak	70	57	
	yellow-poplar	85	86	
Mountain Park	black oak	---	---	Virginia pine, loblolly pine, yellow-poplar
	chestnut oak	---	---	
	hickory	---	---	
	scarlet oak	---	---	
	southern red oak	70	---	
	sweetgum	---	---	
	white oak	---	---	
	yellow-poplar	85	---	
	loblolly pine	70	114	
LrD:				
Louisburg	Virginia pine	65	114	Virginia pine, loblolly pine, slash pine, yellow-poplar
	loblolly pine	75	100	
	shortleaf pine	65	114	
	southern red oak	75	57	
	white oak	65	57	
	yellow-poplar	85	86	
Rion	loblolly pine	80	114	loblolly pine
	southern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
Rock Outcrop	---	---	---	---
LrE:				
Louisburg	Virginia pine	65	114	Virginia pine, loblolly pine, slash pine, yellow-poplar
	loblolly pine	75	100	
	shortleaf pine	65	114	
	southern red oak	75	57	
	white oak	65	57	
	yellow-poplar	85	86	
Rion	loblolly pine	80	114	loblolly pine
	southern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
Rock Outcrop	---	---	---	---
MaB2:				
Madison	Virginia pine	70	114	loblolly pine, shortleaf pine
	loblolly pine	80	114	
	northern red oak	---	57	
	shortleaf pine	70	100	
	southern red oak	---	57	
	white oak	---	57	
	yellow-poplar	---	100	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MaD2:				
Madison------------------	Virginia pine-------	70	114	loblolly pine, shortleaf pine
	loblolly pine-------	80	114	
	northern red oak----	---	57	
	shortleaf pine------	70	100	
	southern red oak----	---	57	
	white oak-----------	---	57	
	yellow-poplar-------	---	100	
MdE2:				
Madison------------------	Virginia pine-------	70	114	loblolly pine, shortleaf pine
	loblolly pine-------	80	114	
	northern red oak----	---	57	
	shortleaf pine------	70	100	
	southern red oak----	---	57	
	white oak-----------	---	57	
	yellow-poplar-------	---	100	
Louisa-------------------	loblolly pine-------	70	100	eastern redcedar, loblolly pine
	longleaf pine-------	65	72	
	shortleaf pine------	65	100	
	southern red oak----	70	57	
	yellow-poplar-------	85	86	
MnA:				
Marvyn-------------------	loblolly pine-------	90	129	loblolly pine, longleaf pine
	longleaf pine-------	80	100	
	shortleaf pine------	80	129	
	sweetgum------------	---	---	
	water oak-----------	---	---	
MrB:				
Marvyn-------------------	loblolly pine-------	90	129	loblolly pine
	longleaf pine-------	80	100	
	shortleaf pine------	80	129	
MW:				
Water--------------------	---	---	---	---
MwB2:				
Mecklenburg--------------	Virginia pine-------	65	---	Virginia pine, loblolly pine
	hickory-------------	---	---	
	loblolly pine-------	85	86	
	northern red oak----	---	---	
	shortleaf pine------	65	86	
	sweetgum------------	---	---	
	white oak-----------	---	---	
MxD2:				
Mecklenburg--------------	Virginia pine-------	65	---	Virginia pine, loblolly pine
	hickory-------------	---	---	
	loblolly pine-------	85	86	
	northern red oak----	---	---	
	shortleaf pine------	65	86	
	sweetgum------------	---	---	
	white oak-----------	---	---	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
PaC2:				
Pacolet	loblolly pine	80	114	loblolly pine, shortleaf pine, yellow-poplar
	shortleaf pine	70	114	
	yellow-poplar	90	86	
	Virginia pine	75	---	
	northern red oak	80	---	
	hickory	---	---	
	white oak	70	---	
PrD2:				
Pacolet	loblolly pine	80	114	loblolly pine, shortleaf pine, yellow-poplar
	shortleaf pine	70	114	
	yellow-poplar	90	86	
	Virginia pine	75	---	
	northern red oak	80	---	
	hickory	---	---	
	white oak	70	---	
Rion	loblolly pine	80	114	loblolly pine, shortleaf pine
	southern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
PrE2:				
Pacolet	loblolly pine	70	86	loblolly pine, shortleaf pine, yellow-poplar
	shortleaf pine	60	86	
	yellow-poplar	---	72	
Rion	loblolly pine	80	114	loblolly pine, shortleaf pine
	southern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
Pt:				
Pits	---	---	---	---
SgD:				
Springhill	loblolly pine	85	129	loblolly pine, longleaf pine, slash pine
	longleaf pine	75	86	
	shortleaf pine	75	129	
	southern red oak	---	57	
	sweetgum	---	100	
	water oak	---	86	
TbD2:				
Tallapoosa	Virginia pine	65	86	loblolly pine
	loblolly pine	70	86	
	longleaf pine	55	43	
	shortleaf pine	65	86	
Badin	loblolly pine	80	110	loblolly pine, shortleaf pine
	shortleaf pine	70	106	
	Virginia pine	---	---	
	yellow-poplar	---	---	
	white oak	65	46	
	scarlet oak	65	47	
	chestnut oak	66	48	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Fruithurst-------------	loblolly pine-------	75	86	loblolly pine,
	longleaf pine-------	65	57	shortleaf pine
	shortleaf pine------	65	86	
TfE2:				
Tallapoosa-------------	Virginia pine-------	65	86	loblolly pine
	loblolly pine-------	70	86	
	longleaf pine-------	55	43	
	shortleaf pine------	65	86	
Fruithurst-------------	loblolly pine-------	70	86	loblolly pine,
	longleaf pine-------	60	57	shortleaf pine
	shortleaf pine------	60	86	
ToA:				
Toccoa-----------------	loblolly pine-------	105	129	American sycamore,
	southern red oak----	85	---	cherrybark oak,
	sweetgum------------	110	143	loblolly pine,
	yellow-poplar-------	115	114	yellow-poplar
Ur:				
Urban Land-------------	---	---	---	---
WeC2:				
Wedowee----------------	Virginia pine-------	70	114	Virginia pine,
	loblolly pine-------	85	114	loblolly pine,
	northern red oak----	75	57	shortleaf pine,
	shortleaf pine------	70	114	yellow-poplar
	southern red oak----	---	57	
	white oak-----------	65	43	
WeD2:				
Wedowee----------------	Virginia pine-------	70	114	Virginia pine,
	loblolly pine-------	85	114	loblolly pine,
	northern red oak----	75	57	shortleaf pine,
	shortleaf pine------	70	114	yellow-poplar
	southern red oak----	---	57	
	white oak-----------	65	43	
WfE:				
Wedowee----------------	Virginia pine-------	70	114	Virginia pine,
	loblolly pine-------	85	114	loblolly pine,
	northern red oak----	75	57	shortleaf pine,
	shortleaf pine------	70	114	yellow-poplar
	southern red oak----	---	57	
	white oak-----------	65	43	
WgC:				
Wedowee----------------	Virginia pine-------	70	114	Virginia pine,
	loblolly pine-------	85	114	loblolly pine,
	northern red oak----	75	57	shortleaf pine,
	shortleaf pine------	70	114	yellow-poplar
	southern red oak----	---	57	
	white oak-----------	65	43	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Saw	shortleaf pine	---	---	loblolly pine, shortleaf pine
	loblolly pine	---	---	
	Virginia pine	---	---	
	white oak	---	---	
	scarlet oak	---	---	
	northern red oak	---	---	
	post oak	---	---	
WhA:				
Wehadkee	American sycamore	---	---	green ash, loblolly pine, sweetgum, yellow-poplar
	green ash	90	---	
	loblolly pine	95	143	
	river birch	---	---	
	sweetgum	95	114	
	water oak	85	86	
	white ash	---	---	
	willow oak	85	114	
	yellow-poplar	90	114	
WkA:				
Wickham	hickory	---	---	loblolly pine
	loblolly pine	90	129	
	northern red oak	---	---	
	red maple	---	---	
	shortleaf pine	75	---	
	southern red oak	80	57	
	sweetgum	90	---	
	water oak	80	---	
	white oak	85	72	
	yellow-poplar	90	86	
WkB:				
Wickham	hickory	---	---	loblolly pine
	loblolly pine	90	129	
	northern red oak	---	---	
	red maple	---	---	
	shortleaf pine	75	---	
	southern red oak	80	57	
	sweetgum	90	---	
	water oak	80	---	
	white oak	85	72	
	yellow-poplar	90	86	
WnD:				
Wynott	Virginia pine	60	100	loblolly pine, shortleaf pine
	loblolly pine	70	100	
	post oak	55	43	
	red maple	70	43	
	shortleaf pine	60	100	
	southern red oak	85	72	
	sweetgum	80	72	
	white oak	70	57	
	yellow-poplar	90	86	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Winnsboro---------------	Virginia pine-------	65	100	eastern redcedar, loblolly pine
	loblolly pine-------	75	100	
	post oak------------	55	43	
	red maple-----------	70	43	
	shortleaf pine------	65	100	
	southern red oak----	85	72	
	sweetgum------------	80	72	
	white oak-----------	70	57	
	yellow-poplar-------	90	86	
WyE:				
Wynott------------------	loblolly pine-------	---	---	loblolly pine, shortleaf pine
	sweetgum------------	---	---	
	southern red oak----	---	---	
	white oak-----------	---	---	
	willow oak----------	---	---	
	hickory-------------	---	---	
	yellow-poplar-------	---	---	
	shortleaf pine------	---	---	
Wilkes------------------	Virginia pine-------	65	---	Virginia pine, eastern redcedar, loblolly pine
	blackjack oak-------	---	---	
	eastern redcedar----	---	---	
	loblolly pine-------	70	100	
	post oak------------	---	57	
	shagbark hickory----	---	---	
	shortleaf pine------	65	100	
	southern red oak----	80	57	
	sweetgum------------	85	86	
	white oak-----------	---	---	

Forestland Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Suitab (nat
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
AlA:								
Altavista	90	Slight		Moderate Low strength	0.50	Slight		Well sui
AtB:								
Altavista	80	Slight		Moderate Low strength	0.50	Moderate Slope/erodibility	0.50	Well sui
BdB2:								
Badin	40	Moderate Low strength	0.50	Severe Low strength	1.00	Moderate Slope/erodibility	0.50	Moderate Low st
Tatum	30	Slight		Severe Low strength	1.00	Slight		Moderate Low st
Tallapoosa	20	Slight		Severe Low strength	1.00	Moderate Slope/erodibility	0.50	Moderate Low st
BfC:								
Badin	60	Moderate Low strength	0.50	Severe Low strength	1.00	Severe Slope/erodibility	0.95	Moderate Low st Slope
Tallapoosa	20	Slight		Severe Low strength	1.00	Severe Slope/erodibility	0.95	Moderate Low st Slope
Fruithurst	10	Slight		Severe Low strength	1.00	Severe Slope/erodibility	0.95	Moderate Low st Slope
BuA:								
Buncombe	70	Severe Flooding	1.00	Moderate Low strength	0.50	Slight		Poorly s Floodi
CdB:								
Cecil	60	Moderate Low strength	0.50	Moderate Low strength	0.50	Moderate Slope/erodibility	0.50	Well sui

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitab (nat: Rating limitin
Urban Land----------	30	Not rated		Not rated		Not rated		Not rate
CeB2:								
Cecil---------------	80	Moderate Low strength	 0.50	Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Well sui
CeC2:								
Cecil---------------	80	Moderate Low strength	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Moderate Slope
CHA:								
Chewacla------------	55	Severe Flooding Low strength	 1.00 0.50	Severe Low strength	 1.00	Slight		Poorly s Floodi Wetnes Low st
Cartecay------------	30	Severe Flooding	 1.00	Moderate Low strength	 0.50	Slight		Poorly s Floodi Wetnes
Toccoa--------------	10	Severe Flooding	 1.00	Moderate Low strength	 0.50	Slight		Poorly s Floodi
CoB:								
Cowarts-------------	85	Slight		Moderate Low strength	 0.50	Slight		Well sui
CoC:								
Cowarts-------------	80	Slight		Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Moderate Slope
CrD:								
Cowarts-------------	75	Slight		Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Moderate Slope
CwE:								
Cowarts-------------	45	Moderate Slope	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope
Uchee---------------	35	Moderate Slope	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Suitab (nat
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
DAM:								
Dam	100	Not rated		Not rated		Not rated		Not rate
EnB:								
Enon	70	Slight		Moderate		Slight		Well sui
				Low strength	0.50			
Wynott	20	Slight		Moderate		Moderate		Well sui
				Low strength	0.50	Slope/erodibility	0.50	
EuA:								
Eunola	80	Slight		Moderate		Slight		Well sui
				Low strength	0.50			
FaA:								
Fluvaquents	90	Severe		Moderate		Slight		Poorly s
		Flooding	1.00	Wetness	0.50			Pondin
		Wetness	1.00	Low strength	0.50			Floodi
		Low strength	0.50					Wetnes
GrA:								
Greenville	90	Slight		Moderate		Slight		Well sui
				Low strength	0.50			
GrB:								
Greenville	90	Slight		Moderate		Moderate		Well sui
				Low strength	0.50	Slope/erodibility	0.50	
GuB:								
Greenville	60	Slight		Moderate		Moderate		Well sui
				Low strength	0.50	Slope/erodibility	0.50	
Urban Land	30	Not rated		Not rated		Not rated		Not rate
GvD2:								
Gwinnett	45	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Lloyd	35	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitab (nat: Rating limitin
GwE2:								
Gwinnett	50	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Agricola	30	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
HdB:								
Hard Labor	90	Slight		Moderate		Moderate		Well sui
				Low strength	0.50	Slope/erodibility	0.50	
HdC:								
Hard Labor	80	Slight		Moderate		Severe		Moderate
				Low strength	0.50	Slope/erodibility	0.95	Slope
HiB2:								
Hiwassee	80	Moderate		Moderate		Moderate		Well sui
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.50	
KnA:								
Kinston	60	Severe		Severe		Slight		Poorly s
		Flooding	1.00	Low strength	1.00			Floodi
								Wetnes
								Low st
Iuka	30	Severe		Moderate		Slight		Poorly s
		Flooding	1.00	Low strength	0.50			Floodi
								Wetnes
LdB2:								
Lloyd	90	Moderate		Moderate		Moderate		Well sui
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.50	
LnB:								
Lloyd	55	Moderate		Moderate		Moderate		Well sui
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.50	
Urban Land	35	Not rated		Not rated		Not rated		Not rate

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitab (natu: Rating c limitin
LoF:								
Louisa----------------	65	Severe Slope Low strength	 1.00 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope
Mountain Park--------	20	Severe Slope	 1.00	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope
LrD:								
Louisburg------------	45	Slight		Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Moderate Slope Rock f
Rion-----------------	35	Slight		Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Moderate Slope Rock f
Rock Outcrop---------	10	Not rated		Not rated		Not rated		Not rate
LrE:								
Louisburg------------	40	Moderate Slope	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope Rock f
Rion-----------------	40	Moderate Slope	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Poorly s Slope Rock f
Rock Outcrop---------	10	Not rated		Not rated		Not rated		Not rate
MaB2:								
Madison--------------	80	Moderate Low strength	 0.50	Moderate Low strength	 0.50	Moderate Slope/erodibility	 0.50	Well sui
MaD2:								
Madison--------------	75	Moderate Low strength	 0.50	Moderate Low strength	 0.50	Severe Slope/erodibility	 0.95	Moderate Slope

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitab (nat: Rating limitin
MdE2:								
Madison	60	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Louisa	30	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
MnA:								
Marvyn	90	Slight		Moderate		Slight		Well sui
				Low strength	0.50			
MrB:								
Marvyn	90	Slight		Moderate		Slight		Well sui
				Low strength	0.50			
MwB2:								
Mecklenburg	90	Moderate		Moderate		Moderate		Well sui
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.50	
MxD2:								
Mecklenburg	80	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
PaC2:								
Pacolet	80	Slight		Moderate		Moderate		Moderate
				Low strength	0.50	Slope/erodibility	0.50	Slope
PrD2:								
Pacolet	55	Slight		Moderate		Moderate		Moderate
				Low strength	0.50	Slope/erodibility	0.50	Slope
Rion	25	Slight		Moderate		Moderate		Moderate
				Low strength	0.50	Slope/erodibility	0.50	Slope
PrE2:								
Pacolet	60	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Rion	30	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Pt:								
Pits	90	Not rated		Not rated		Not rated		Not rate

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Suitab (nat
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
SgD:								
Springhill	80	Slight		Moderate		Moderate		Moderate
				Low strength	0.50	Slope/erodibility	0.50	Slope
TbD2:								
Tallapoosa	40	Slight		Severe		Severe		Moderate
				Low strength	1.00	Slope/erodibility	0.95	Slope
								Low st
Badin	25	Moderate		Severe		Severe		Moderate
		Low strength	0.50	Low strength	1.00	Slope/erodibility	0.95	Slope
								Low st
Fruithurst	25	Slight		Severe		Severe		Moderate
				Low strength	1.00	Slope/erodibility	0.95	Slope
								Low st
TfE2:								
Tallapoosa	60	Moderate		Severe		Severe		Poorly s
		Slope	0.50	Low strength	1.00	Slope/erodibility	0.95	Slope
								Low st
Fruithurst	30	Moderate		Severe		Severe		Poorly s
		Slope	0.50	Low strength	1.00	Slope/erodibility	0.95	Slope
								Low st
ToA:								
Toccoa	80	Severe		Moderate		Slight		Poorly s
		Flooding	1.00	Low strength	0.50			Floodi
Ur:								
Urban Land	85	Not rated		Not rated		Not rated		Not rate
WeC2:								
Wedowee	80	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
WeD2:								
Wedowee	75	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope

Forestland Management, Part I—Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitab (nat: Rating limitin
WfE:								
Wedowee-------------	75	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
WgC:								
Wedowee-------------	60	Moderate		Moderate		Severe		Moderate
		Low strength	0.50	Low strength	0.50	Slope/erodibility	0.95	Rock f
								Slope
Saw-----------------	30	Moderate		Moderate		Moderate		Moderate
		Restrictive layer	0.50	Low strength	0.50	Slope/erodibility	0.50	Rock f
								Slope
WhA:								
Wehadkee------------	75	Severe		Severe		Slight		Poorly s
		Flooding	1.00	Low strength	1.00			Floodi
		Low strength	0.50					Wetnes
								Low st
WkA:								
Wickham-------------	80	Moderate		Severe		Slight		Moderate
		Low strength	0.50	Low strength	1.00			Low st
WkB:								
Wickham-------------	90	Moderate		Severe		Moderate		Moderate
		Low strength	0.50	Low strength	1.00	Slope/erodibility	0.50	Low st
WnD:								
Wynott--------------	60	Slight		Moderate		Severe		Moderate
				Low strength	0.50	Slope/erodibility	0.95	Slope
Winnsboro-----------	20	Moderate		Moderate		Moderate		Moderate
		Sandiness	0.50	Low strength	0.50	Slope/erodibility	0.50	Slope
WyE:								
Wynott--------------	65	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope
Wilkes--------------	20	Moderate		Moderate		Severe		Poorly s
		Slope	0.50	Low strength	0.50	Slope/erodibility	0.95	Slope

Forestland Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Po seedl
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
AlA:								
Altavista-----------	90	Well suited		Well suited		Well suited		Low
AtB:								
Altavista-----------	80	Well suited		Well suited		Well suited		Low
BdB2:								
Badin---------------	40	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
Tatum---------------	30	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
		Rock fragments	0.50					
Tallapoosa----------	20	Moderately suited		Well suited		Well suited		Low
		Rock fragments	0.50					
BfC:								
Badin---------------	60	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
		Slope	0.50					
Tallapoosa----------	20	Moderately suited		Well suited		Well suited		Low
		Rock fragments	0.50					
		Slope	0.50					
Fruithurst----------	10	Moderately suited		Well suited		Well suited		Low
		Rock fragments	0.50					
		Slope	0.50					
BuA:								
Buncombe------------	70	Well suited		Well suited		Well suited		Low

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Po... seedl...: Rating ... limitin...
CdB:								
Cecil	60	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
Urban Land	30	Not rated		Not rated		Not rated		Not rate
CeB2:								
Cecil	80	Well suited		Well suited		Well suited		Low
CeC2:								
Cecil	80	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
		Slope	0.50					
CHA:								
Chewacla	55	Well suited		Well suited		Well suited		High
								Wetnes
Cartecay	30	Well suited		Well suited		Well suited		High
								Wetnes
Toccoa	10	Well suited		Well suited		Well suited		Low
CoB:								
Cowarts	85	Well suited		Well suited		Well suited		Low
CoC:								
Cowarts	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
CrD:								
Cowarts	75	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					
CwE:								
Cowarts	45	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Rock fragments	0.50					

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Po... seedl... : Rating ... limitin...
Uchee----------------	35	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa...
DAM:								
Dam------------------	100	Not rated		Not rated		Not rated		Not rate...
EnB:								
Enon-----------------	70	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Rock fragments	0.50			
		Rock fragments	0.75	Stickiness; high plasticity index	0.50			
Wynott---------------	20	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
		Rock fragments	0.50					
EuA:								
Eunola---------------	80	Well suited		Well suited		Well suited		Low
FaA:								
Fluvaquents----------	90	Poorly suited		Unsuited		Unsuited		High
		Wetness	0.75	Wetness	0.75	Wetness	1.00	Wetnes...
GrA:								
Greenville-----------	90	Well suited		Well suited		Well suited		Low
GrB:								
Greenville-----------	90	Well suited		Well suited		Well suited		Low
GuB:								
Greenville-----------	60	Well suited		Well suited		Well suited		Low
Urban Land-----------	30	Not rated		Not rated		Not rated		Not rate...

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Po seedl: Rating limitin
GvD2:								
Gwinnett------------	45	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Stickiness; high plasticity index	0.50					
Lloyd---------------	35	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
		Slope	0.50					
GwE2:								
Gwinnett------------	50	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Stickiness; high plasticity index	0.50					
Agricola------------	30	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
		Stickiness; high plasticity index	0.50					
		Rock fragments	0.50					
HdB:								
Hard Labor----------	90	Well suited		Well suited		Well suited		Low
HdC:								
Hard Labor----------	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
HiB2:								
Hiwassee------------	80	Well suited		Well suited		Well suited		Low
KnA:								
Kinston-------------	60	Well suited		Well suited		Well suited		High
								Wetnes
Iuka----------------	30	Well suited		Well suited		Well suited		High
								Wetnes

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Po... seedl...
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating ... limitin...
LdB2:								
Lloyd	90	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
LnB:								
Lloyd	55	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
Urban Land	35	Not rated		Not rated		Not rated		Not rate...
LoF:								
Louisa	65	Unsuited		Poorly suited		Poorly suited		Moderate
		Slope	1.00	Slope	0.50	Slope	0.50	Availa...
Mountain Park	20	Unsuited		Poorly suited		Poorly suited		Moderate
		Slope	1.00	Slope	0.50	Slope	0.50	Availa...
		Rock fragments	0.50					
LrD:								
Louisburg	45	Moderately suited		Poorly suited		Well suited		Low
		Slope	0.50	Rock fragments	0.50			
		Rock fragments	0.50					
Rion	35	Moderately suited		Poorly suited		Well suited		Low
		Slope	0.50	Rock fragments	0.50			
		Rock fragments	0.50					
Rock Outcrop	10	Not rated		Not rated		Not rated		Not rate...
LrE:								
Louisburg	40	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa...
		Rock fragments	0.50	Rock fragments	0.50			
Rion	40	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa...
		Rock fragments	0.50	Rock fragments	0.50			

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Po seedl: Rating limitin
Rock Outcrop--------	10	Not rated		Not rated		Not rated		Not rate
MaB2:								
Madison-------------	80	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
MaD2:								
Madison-------------	75	Moderately suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50			
		Slope	0.50					
MdE2:								
Madison-------------	60	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Stickiness; high plasticity index	0.50					
Louisa--------------	30	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
MnA:								
Marvyn--------------	90	Well suited		Well suited		Well suited		Low
MrB:								
Marvyn--------------	90	Well suited		Well suited		Well suited		Low
MW:								
Water---------------	100	Not rated		Not rated		Not rated		Not rate
MwB2:								
Mecklenburg---------	90	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
		Rock fragments	0.50					

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Po seedl
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
MxD2:								
Mecklenburg----------	80	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
		Slope	0.50					
		Rock fragments	0.50					
PaC2:								
Pacolet--------------	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Stickiness; high plasticity index	0.50					
		Rock fragments	0.50					
PrD2:								
Pacolet--------------	55	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Stickiness; high plasticity index	0.50					
		Rock fragments	0.50					
Rion-----------------	25	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					
PrE2:								
Pacolet--------------	60	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Stickiness; high plasticity index	0.50					
		Rock fragments	0.50					
Rion-----------------	30	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
		Rock fragments	0.50					
Pt:								
Pits-----------------	90	Not rated		Not rated		Not rated		Not rate

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Po seedl
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin
SgD:								
Springhill----------	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
TbD2:								
Tallapoosa----------	40	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					
Badin---------------	25	Moderately suited		Well suited		Well suited		Low
		Stickiness; high plasticity index	0.50					
		Slope	0.50					
Fruithurst----------	25	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					
TfE2:								
Tallapoosa----------	60	Unsuited		Poorly suited		Poorly suited		Moderate
		Slope	1.00	Slope	0.50	Slope	0.50	Availa
		Rock fragments	0.50					
Fruithurst----------	30	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Rock fragments	0.50					
ToA:								
Toccoa--------------	80	Well suited		Well suited		Well suited		Low
Ur:								
Urban Land----------	85	Not rated		Not rated		Not rated		Not rate
WeC2:								
Wedowee-------------	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					
WeD2:								
Wedowee-------------	75	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Rock fragments	0.50					

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Po seedl: Rating limitin
WfE:								
Wedowee	75	Poorly suited		Poorly suited		Poorly suited		Moderate
		Slope	0.75	Slope	0.50	Slope	0.50	Availa
		Rock fragments	0.50	Rock fragments	0.50			
WgC:								
Wedowee	60	Moderately suited		Poorly suited		Well suited		Low
		Rock fragments	0.50	Rock fragments	0.50			
		Slope	0.50					
Saw	30	Moderately suited		Poorly suited		Unsuited		Low
		Rock fragments	0.50	Rock fragments	0.50	Restrictive layer	1.00	
		Slope	0.50					
		Stickiness; high plasticity index	0.50					
WhA:								
Wehadkee	75	Well suited		Well suited		Well suited		High
								Wetnes
WkA:								
Wickham	80	Well suited		Well suited		Well suited		Low
WkB:								
Wickham	90	Well suited		Well suited		Well suited		Low
WnD:								
Wynott	60	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50			
		Slope	0.50					
		Rock fragments	0.50					
Winnsboro	20	Poorly suited		Poorly suited		Well suited		Low
		Stickiness; high plasticity index	0.75	Rock fragments	0.50			
		Rock fragments	0.75	Stickiness; high plasticity index	0.50			
		Slope	0.50					
		Sandiness	0.50					

Forestland Management, Part II—Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Po seedl	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating limitin	
WyE:									
Wynott	65	Poorly suited		Poorly suited		Poorly suited		Moderate	
		Slope	0.75	Slope	0.50	Slope	0.50	Availa	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.50				
		Rock fragments	0.50						
Wilkes	20	Poorly suited		Poorly suited		Poorly suited		Moderate	
		Slope	0.75	Slope	0.50	Slope	0.50	Availa	
		Stickiness; high plasticity index	0.50						
		Rock fragments	0.50						

Camp Areas, Picnic Areas, and Playgrounds

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AlA:						
Altavista	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
	Depth to saturated zone	0.39				
AtB:						
Altavista	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.19	Slope	0.50
	Depth to saturated zone	0.39			Depth to saturated zone	0.39
BdB2:						
Badin	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
					Depth to bedrock	0.65
					Slope	0.50
Tatum	Somewhat limited		Somewhat limited		Very limited	
	Gravel content	0.32	Gravel content	0.32	Gravel content	1.00
					Slope	0.50
Tallapoosa	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
	Gravel content	0.08	Gravel content	0.08	Depth to bedrock	1.00
					Slope	0.50
BfC:						
Badin	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Slope	0.01	Slope	0.01	Slow water movement	0.94
					Depth to bedrock	0.65
Tallapoosa	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
	Slope	0.01	Slope	0.01	Slope	1.00
Fruithurst	Somewhat limited		Somewhat limited		Very limited	
	Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
	Slope	0.01	Slope	0.01	Slope	1.00
					Depth to bedrock	0.46
BuA:						
Buncombe	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Too sandy	0.79	Flooding	1.00
	Too sandy	0.79	Flooding	0.40	Too sandy	0.79
CdB:						
Cecil	Not limited		Not limited		Somewhat limited	
					Slope	0.50
Urban land	Not rated		Not rated		Not rated	

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
CeB2:						
Cecil	Not limited		Not limited		Somewhat limited	
					Slope	0.50
CeC2:						
Cecil	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
CHA:						
Chewacla	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.99	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
Cartecay	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.99	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
Toccoa	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
CoB:						
Cowarts	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
	Slow water movement	0.85	Slow water movement	0.85	Slow water movement	0.85
					Slope	0.50
CoC:						
Cowarts	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slow water movement	0.85	Slow water movement	0.85	Too sandy	0.95
					Slow water movement	0.85
CrD:						
Cowarts	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.85	Slow water movement	0.85	Slope	1.00
					Gravel content	1.00
	Slope	0.63	Slope	0.63	Slow water movement	0.85
	Gravel content	0.02	Gravel content	0.02		
CwE:						
Cowarts	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Slow water movement	0.85	Slow water movement	0.85	Gravel content	1.00
					Slow water movement	0.85
	Gravel content	0.02	Gravel content	0.02		
Uchee	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
EnB:						
Enon----------------	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Gravel content	1.00
	Gravel content	0.07	Gravel content	0.07	Slow water movement	0.94
					Slope	0.50
Wynott--------------	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Gravel content	1.00
	Gravel content	0.47	Gravel content	0.47	Slow water movement	0.94
					Slope	0.50
EuA:						
Eunola--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
FaA:						
Fluvaquents---------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Slow water movement	0.94	Ponding	1.00
GrA:						
Greenville----------	Not limited		Not limited		Not limited	
GrB:						
Greenville----------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
GuB:						
Greenville----------	Not limited		Not limited		Somewhat limited	
					Slope	0.12
Urban land----------	Not rated		Not rated		Not rated	
GvD2:						
Gwinnett------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
Lloyd---------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
GwE2:						
Gwinnett------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Agricola------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
					Depth to bedrock	0.10

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HdB:						
Hard Labor----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
	Slow water movement	0.15	Slow water movement	0.15	Slope	0.50
					Slow water movement	0.15
HdC:						
Hard Labor----------	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slow water movement	0.15	Slow water movement	0.15	Too sandy	0.95
	Slope	0.01	Slope	0.01	Slow water movement	0.15
HiB2:						
Hiwassee------------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
KnA:						
Kinston-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
Iuka----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
LdB2:						
Lloyd---------------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
LnB:						
Lloyd---------------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
Urban land----------	Not rated		Not rated		Not rated	
LoF:						
Louisa--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
					Gravel content	0.22
Mountain Park-------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Gravel content	0.56
					Depth to bedrock	0.29
LrD:						
Louisburg-----------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
	Large stones content	0.19	Large stones content	0.19	Gravel content	0.98
					Large stones content	0.19

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
Rion----------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
	Large stones content	0.19	Large stones content	0.19	Gravel content	1.00
	Gravel content	0.02	Gravel content	0.02	Large stones content	0.19
Rock outcrop--------	Not rated		Not rated		Not rated	
LrE:						
Louisburg-----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Large stones content	0.19	Large stones content	0.19	Gravel content	0.98
					Large stones content	0.19
Rion----------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Large stones content	0.19	Large stones content	0.19	Gravel content	1.00
	Gravel content	0.02	Gravel content	0.02	Large stones content	0.19
Rock outcrop--------	Not rated		Not rated		Not rated	
MaB2:						
Madison-------------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
MaD2:						
Madison-------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
MdE2:						
Madison-------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Louisa--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
					Gravel content	0.22
MnA:						
Marvyn--------------	Not limited		Not limited		Not limited	
MrB:						
Marvyn--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.12
MwB2:						
Mecklenburg---------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
					Slope	0.50
					Gravel content	0.22

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MxD2:						
Mecklenburg	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Slope	0.37	Slope	0.37	Slow water movement	0.94
					Gravel content	0.22
PaC2:						
Pacolet	Not limited		Not limited		Very limited	
					Slope	1.00
					Gravel content	0.22
PrD2:						
Pacolet	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Gravel content	0.18
Rion	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
	Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
PrE2:						
Pacolet	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Gravel content	0.07
Rion	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
Pt:						
Pits	Not rated		Not rated		Not rated	
SgD:						
Springhill	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
TbD2:						
Tallapoosa	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
	Slope	0.37	Slope	0.37	Slope	1.00
	Gravel content	0.08	Gravel content	0.08	Depth to bedrock	1.00
Badin	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Slope	0.37	Slope	0.37	Slow water movement	0.94
					Depth to bedrock	0.65
Fruithurst	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Depth to bedrock	0.46
					Gravel content	0.22
TfE2:						
Tallapoosa	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Gravel content	0.05	Gravel content	0.05	Gravel content	1.00

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
Fruithurst	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
					Depth to bedrock	0.46
ToA:						
Toccoa	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
Ur:						
Urban land	Not rated		Not rated		Not rated	
WeC2:						
Wedowee	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
					Gravel content	0.07
WeD2:						
Wedowee	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Gravel content	0.07
WfE:						
Wedowee	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Gravel content	0.07
WgC:						
Wedowee	Somewhat limited		Somewhat limited		Very limited	
	Large stones content	0.76	Large stones content	0.76	Slope	1.00
	Slope	0.01	Slope	0.01	Large stones content	0.76
					Gravel content	0.07
Saw	Somewhat limited		Somewhat limited		Very limited	
	Large stones content	0.76	Large stones content	0.76	Slope	1.00
	Slope	0.01	Slope	0.01	Large stones content	0.76
					Depth to bedrock	0.16
WhA:						
Wehadkee	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
WkA:						
Wickham	Very limited		Not limited		Not limited	
	Flooding	1.00				
WkB:						
Wickham	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Slope	0.50

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WnD:						
Wynott	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
	Gravel content	0.36	Gravel content	0.36	Slow water movement	0.94
Winnsboro	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
	Slope	0.16	Slope	0.16	Slow water movement	0.94
WyE:						
Wynott	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Slow water movement	0.94	Slow water movement	0.94	Gravel content	1.00
	Large stones content	0.76	Large stones content	0.76	Slow water movement	0.94
Wilkes	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Gravel content	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Large stones content	0.76	Large stones content	0.76	Depth to bedrock	1.00

Paths, Trails, and Golf Fairways

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
AlA:						
Altavista	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
AtB:						
Altavista	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
BdB2:						
Badin	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.65
Tatum	Not limited		Not limited		Somewhat limited	
					Gravel content	0.32
Tallapoosa	Not limited		Not limited		Very limited	
					Depth to bedrock	1.00
					Droughty	0.70
					Gravel content	0.08
BfC:						
Badin	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.65
					Slope	0.01
Tallapoosa	Not limited		Not limited		Very limited	
					Depth to bedrock	1.00
					Droughty	0.70
					Gravel content	0.05
Fruithurst	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.46
					Gravel content	0.05
					Slope	0.01
BuA:						
Buncombe	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.79	Too sandy	0.79	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Droughty	0.99
CdB:						
Cecil	Not limited		Not limited		Not limited	
Urban land	Not rated		Not rated		Not rated	
CeB2:						
Cecil	Not limited		Not limited		Not limited	
CeC2:						
Cecil	Not limited		Not limited		Somewhat limited	
					Slope	0.01

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
CHA:						
Chewacla	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.99
Cartecay	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.99
Toccoa	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
CoB:						
Cowarts	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.95	Too sandy	0.95		
CoC:						
Cowarts	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.95	Too sandy	0.95		
CrD:						
Cowarts	Not limited		Not limited		Somewhat limited	
					Slope	0.63
					Gravel content	0.02
CwE:						
Cowarts	Somewhat limited		Not limited		Very limited	
	Slope	0.50			Slope	1.00
					Gravel content	0.02
Uchee	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.84	Too sandy	0.84	Slope	1.00
	Slope	0.50				
DAM:						
Dam	Not rated		Not rated		Not rated	
EnB:						
Enon	Not limited		Not limited		Somewhat limited	
					Gravel content	0.07
Wynott	Not limited		Not limited		Somewhat limited	
					Gravel content	0.47
					Depth to bedrock	0.01
EuA:						
Eunola	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
FaA:						
Fluvaquents	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
GrA:						
Greenville----------	Not limited		Not limited		Not limited	
GrB:						
Greenville----------	Not limited		Not limited		Not limited	
GuB:						
Greenville----------	Not limited		Not limited		Not limited	
Urban land----------	Not rated		Not rated		Not rated	
GvD2:						
Gwinnett------------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
Lloyd---------------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
GwE2:						
Gwinnett------------	Somewhat limited		Not limited		Very limited	
	Slope	0.50			Slope	1.00
Agricola------------	Somewhat limited		Not limited		Very limited	
	Slope	0.50			Slope	1.00
					Gravel content	0.41
					Depth to bedrock	0.10
HdB:						
Hard Labor----------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.95	Too sandy	0.95		
HdC:						
Hard Labor----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Slope	0.01
HiB2:						
Hiwassee------------	Not limited		Not limited		Not limited	
KnA:						
Kinston-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Iuka----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
LdB2:						
Lloyd---------------	Not limited		Not limited		Not limited	
LnB:						
Lloyd---------------	Not limited		Not limited		Not limited	
Urban land----------	Not rated		Not rated		Not rated	

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LoF:						
Louisa	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.78	Slope	1.00
					Depth to bedrock	1.00
					Droughty	0.97
Mountain Park	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.78	Slope	1.00
					Depth to bedrock	0.29
					Droughty	0.02
LrD:						
Louisburg	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.19	Large stones content	0.19	Slope	0.37
					Large stones content	0.32
Rion	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.19	Large stones content	0.19	Slope	0.37
					Gravel content	0.02
Rock outcrop	Not rated		Not rated		Not rated	
LrE:						
Louisburg	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.82	Large stones content	0.19	Slope	1.00
	Large stones content	0.19			Large stones content	0.32
Rion	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.82	Large stones content	0.19	Slope	1.00
	Large stones content	0.19			Gravel content	0.02
Rock outcrop	Not rated		Not rated		Not rated	
MaB2:						
Madison	Not limited		Not limited		Not limited	
MaD2:						
Madison	Not limited		Not limited		Somewhat limited	
					Slope	0.37
MdE2:						
Madison	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
Louisa	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
					Depth to bedrock	1.00
					Droughty	0.97
MnA:						
Marvyn	Not limited		Not limited		Not limited	
MrB:						
Marvyn	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.81	Too sandy	0.81		

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
MwB2:						
Mecklenburg----------	Not limited		Not limited		Not limited	
MxD2:						
Mecklenburg----------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
PaC2:						
Pacolet-------------	Not limited		Not limited		Not limited	
PrD2:						
Pacolet-------------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
Rion----------------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
					Gravel content	0.02
PrE2:						
Pacolet-------------	Somewhat limited		Not limited		Very limited	
	Slope	0.50			Slope	1.00
					Large stones content	0.32
Rion----------------	Somewhat limited		Not limited		Very limited	
	Slope	0.50			Slope	1.00
					Gravel content	0.02
Pt:						
Pits----------------	Not rated		Not rated		Not rated	
SgD:						
Springhill----------	Not limited		Not limited		Somewhat limited	
					Slope	0.63
TbD2:						
Tallapoosa----------	Not limited		Not limited		Very limited	
					Depth to bedrock	1.00
					Droughty	0.70
					Slope	0.37
Badin---------------	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.65
					Slope	0.37
Fruithurst----------	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.46
					Slope	0.37
TfE2:						
Tallapoosa----------	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.08	Slope	1.00
					Depth to bedrock	1.00
					Droughty	0.70
Fruithurst----------	Very limited		Not limited		Very limited	
	Slope	1.00			Slope	1.00
					Depth to bedrock	0.46
					Gravel content	0.05

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
ToA:						
Toccoa	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
Ur:						
Urban land	Not rated		Not rated		Not rated	
WeC2:						
Wedowee	Not limited		Not limited		Somewhat limited	
					Large stones content	0.32
					Slope	0.01
WeD2:						
Wedowee	Not limited		Not limited		Somewhat limited	
					Slope	0.37
					Large stones content	0.32
WfE:						
Wedowee	Very limited		Not limited		Very limited	
	Slope	1.00			Slope	1.00
					Large stones content	0.32
WgC:						
Wedowee	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.76	Large stones content	0.76	Large stones content	0.32
					Slope	0.01
Saw	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.76	Large stones content	0.76	Depth to bedrock	0.16
					Slope	0.01
					Droughty	0.01
WhA:						
Wehadkee	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
WkA:						
Wickham	Not limited		Not limited		Not limited	
WkB:						
Wickham	Not limited		Not limited		Not limited	
WnD:						
Wynott	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.76	Large stones content	0.76	Gravel content	0.36
					Slope	0.16
					Depth to bedrock	0.01
Winnsboro	Somewhat limited		Somewhat limited		Somewhat limited	
	Large stones content	0.76	Large stones content	0.76	Slope	0.16
					Gravel content	0.11
					Large stones content	0.01

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
WyE:						
Wynott	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Large stones content	0.76	Slope	1.00
	Large stones content	0.76			Gravel content	0.36
					Depth to bedrock	0.01
Wilkes	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Large stones content	0.76	Slope	1.00
	Large stones content	0.76			Depth to bedrock	1.00
					Droughty	0.98

Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is app

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habi: Openland wildlife	Woodland wildlife
AlA:									
Altavista	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
AtB:									
Altavista	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
BdB2:									
Badin	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good
Tatum	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good
Tallapoosa	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good
BfC:									
Badin	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good
Tallapoosa	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair
Fruithurst	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
BuA:									
Buncombe	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor
CdB:									
Cecil	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good
Urban Land	---	---	---	---	---	---	---	---	---
CeB2:									
Cecil	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habi	
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife
CeC2:									
Cecil	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
CHA:									
Chewacla	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good
Cartecay	Poor	Fair	Fair	Good	Good	Fair	Poor	Fair	Good
Toccoa	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good
CoB:									
Cowarts	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair
CoC:									
Cowarts	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair
CrD:									
Cowarts	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair
CwE:									
Cowarts	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
Uchee	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair
DAM:									
Dam	---	---	---	---	---	---	---	---	---
EnB:									
Enon	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
Wynott	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good
EuA:									
Eunola	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habi[tat for]: Openland wildlife	Woodland wildlife
FaA:									
Fluvaquents	Very poor	Poor	Poor	Very poor	Very poor	Good	Good	Poor	Poor
GrA:									
Greenville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good
GrB:									
Greenville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good
GuB:									
Greenville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good
Urban Land	---	---	---	---	---	---	---	---	---
GvD2:									
Gwinnett	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
Lloyd	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
GwE2:									
Gwinnett	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
Agricola	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
HdB:									
Hard Labor	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
HdC:									
Hard Labor	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
HiB2:									
Hiwassee	Good	Good	Good	Fair	Good	Poor	Very poor	Good	Good

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habi	
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife
KnA:									
Kinston	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor
Iuka	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good
LdB2:									
Lloyd	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
LnB:									
Lloyd	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
Urban Land	---	---	---	---	---	---	---	---	---
LoF:									
Louisa	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair
Mountain Park	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
LrD:									
Louisburg	Poor	Fair	Very poor	Poor	Poor	Very poor	Very poor	Poor	Poor
Rion	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
LrE:									
Louisburg	Poor	Fair	Very poor	Poor	Poor	Very poor	Very poor	Poor	Poor
Rion	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habi[tat for—]	
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife
MaB2:									
Madison-----------------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
MaD2:									
Madison-----------------	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
MdE2:									
Madison-----------------	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
Louisa------------------	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair
MnA:									
Marvyn------------------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
MrB:									
Marvyn------------------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
MwB2:									
Mecklenburg-------------	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair
MxD2:									
Mecklenburg-------------	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair
PaC2:									
Pacolet-----------------	Fair	Fair	Fair	Good	Good	Very poor	Very poor	Fair	Good
PrD2:									
Pacolet-----------------	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair
Rion--------------------	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habi[tat]	
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife
PrE2:									
Pacolet	Very poor	Poor	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair
Rion	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Poor	Fair
Pt:									
Pits	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
SgD:									
Springhill	Fair	Good	Good	Good	Good	Very poor	---	---	---
TbD2:									
Tallapoosa	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair
Badin	Fair	Good	Good	Good	Good	Poor	Very poor	Fair	Good
Fruithurst	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
TfE2:									
Tallapoosa	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair
Fruithurst	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
ToA:									
Toccoa	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
Ur:									
Urban Land	---	---	---	---	---	---	---	---	---
WeC2:									
Wedowee	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good

Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habi	
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife
WeD2:									
Wedowee	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
WfE:									
Wedowee	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good
WgC:									
Wedowee	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
Saw	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good
WhA:									
Wehadkee	Very poor	Poor	Poor	Fair	Fair	Good	Fair	Poor	Fair
WkA:									
Wickham	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
WkB:									
Wickham	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good
WnD:									
Wynott	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good
Winnsboro	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good
WyE:									
Wynott	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good
Wilkes	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Poor

Hydric Soils

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any colum indicate that the data were not included in the database. See text for definitions of hydric cri codes.)

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hyd crit
FaA: Fluvaquents, 0 to 1 percent slopes, ponded	Fluvaquents	90	Flood plains	Yes	2B3,
KnA: Kinston-Iuka complex, 0 to 1 percent slopes, frequently flooded	Kinston	60		Yes	2B3
WhA: Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded	Wehadkee	75		Yes	2B3

Dwellings and Small Commercial Buildings

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AlA:							
Altavista	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
AtB:							
Altavista	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
BdB2:							
Badin	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Shrink-swell	0.50
				Shrink-swell	0.50		
Tatum	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Tallapoosa	20	Somewhat limited		Very limited		Somewhat limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
BfC:							
Badin	60	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Slope	1.00
		Slope	0.01	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.01		
Tallapoosa	20	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.01	Slope	0.01	Slope	1.00
Fruithurst	10	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Depth to soft bedrock	0.46	Slope	1.00
				Slope	0.01		
BuA:							
Buncombe	70	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
CdB:							
Cecil	60	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	
CeB2:							
Cecil	80	Not limited		Not limited		Not limited	

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
CeC2:							
Cecil	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
CHA:							
Chewacla	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Cartecay	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Toccoa	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.73		
CoB:							
Cowarts	85	Not limited		Not limited		Not limited	
CoC:							
Cowarts	80	Not limited		Not limited		Somewhat limited	
						Slope	0.88
CrD:							
Cowarts	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
CwE:							
Cowarts	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to saturated zone	0.82		
				Shrink-swell	0.50		
DAM:							
Dam	100	Not rated		Not rated		Not rated	
EnB:							
Enon	70	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Wynott	20	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
				Depth to soft bedrock	0.01		
EuA:							
Eunola	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
FaA:							
Fluvaquents	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
GrA:							
Greenville	90	Not limited		Not limited		Not limited	
GrB:							
Greenville	90	Not limited		Not limited		Not limited	
GuB:							
Greenville	60	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	
GvD2:							
Gwinnett	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Lloyd	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
GwE2:							
Gwinnett	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Agricola	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.10		
HdB:							
Hard Labor	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
HdC:							
Hard Labor	80	Somewhat limited		Very limited		Very limited	
		Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
				Slope	0.01		
HiB2:							
Hiwassee	80	Not limited		Not limited		Not limited	
KnA:							
Kinston	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Iuka	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
LdB2:							
Lloyd	90	Not limited		Not limited		Not limited	
LnB:							
Lloyd	55	Not limited		Not limited		Not limited	
Urban land	35	Not rated		Not rated		Not rated	
LoF:							
Louisa	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Mountain Park	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.29		
LrD:							
Louisburg	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Rion	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
LrE:							
Louisburg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rion	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
MaB2:							
Madison	80	Not limited		Not limited		Not limited	
MaD2:							
Madison	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
MdE2:							
Madison	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Louisa	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
MnA:							
Marvyn	90	Not limited		Not limited		Not limited	
MrB:							
Marvyn	90	Not limited		Not limited		Not limited	

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
MwB2:							
Mecklenburg----------	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
MxD2:							
Mecklenburg----------	80	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Slope	0.37	Slope	1.00
		Slope	0.37			Shrink-swell	0.50
PaC2:							
Pacolet--------------	80	Not limited		Not limited		Somewhat limited	
						Slope	0.72
PrD2:							
Pacolet--------------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Rion-----------------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
PrE2:							
Pacolet--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rion-----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Pt:							
Pits-----------------	90	Not rated		Not rated		Not rated	
SgD:							
Springhill-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
TbD2:							
Tallapoosa-----------	40	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
Badin----------------	25	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Slope	1.00
		Slope	0.37	Shrink-swell	0.50	Shrink-swell	0.5
				Slope	0.37		
Fruithurst-----------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Depth to soft bedrock	0.46	Slope	1.00
				Slope	0.37		
TfE2:							
Tallapoosa-----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
Fruithurst----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.46		
ToA:							
Toccoa--------------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.73		
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
WeC2:							
Wedowee-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
WeD2:							
Wedowee-------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
WfE:							
Wedowee-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WgC:							
Wedowee-------------	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Saw-----------------	30	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.15	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to hard bedrock	0.15
WhA:							
Wehadkee------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WkA:							
Wickham-------------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
WkB:							
Wickham-------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
WnD:							
Wynott--------------	60	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
				Depth to soft bedrock	0.01		

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Winnsboro-----------	20	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
WyE:							
Wynott--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
				Depth to soft bedrock	0.01		
Wilkes--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AlA:							
Altavista-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Flooding	0.40	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
AtB:							
Altavista-----------	80	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Flooding	0.40	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
BdB2:							
Badin---------------	40	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.64	Depth to bedrock	0.65
		Shrink-swell	0.50	Cutbanks cave	0.10		
Tatum---------------	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.12	Gravel content	0.32
		Shrink-swell	0.50				
Tallapoosa----------	20	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.70
		Low strength	1.00	Cutbanks cave	0.10	Gravel content	0.08
BfC:							
Badin---------------	60	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.64	Depth to bedrock	0.65
		Shrink-swell	0.50			Slope	0.01
		Slope	0.01	Cutbanks cave	0.10		
				Slope	0.01		
Tallapoosa----------	20	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.70
		Low strength	1.00	Cutbanks cave	0.10	Gravel content	0.05
		Slope	0.01	Slope	0.01		
Fruithurst----------	10	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.46	Depth to bedrock	0.46
		Slope	0.01			Gravel content	0.05
				Cutbanks cave	0.10	Slope	0.01
				Slope	0.01		
BuA:							
Buncombe------------	70	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80	Droughty	0.99

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
CdB:							
Cecil	60	Somewhat limited Low strength	 0.10	Somewhat limited Too clayey Cutbanks cave	 0.27 0.10	Not limited	
Urban land	30	Not rated		Not rated		Not rated	
CeB2:							
Cecil	80	Somewhat limited Low strength	 0.10	Somewhat limited Too clayey Cutbanks cave	 0.27 0.10	Not limited	
CeC2:							
Cecil	80	Somewhat limited Low strength Slope	 0.10 0.01	Somewhat limited Too clayey Cutbanks cave Slope	 0.27 0.10 0.01	Somewhat limited Slope	 0.01
CHA:							
Chewacla	55	Very limited Flooding Low strength Depth to saturated zone	 1.00 1.00 0.99	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 0.99
Cartecay	30	Very limited Flooding Depth to saturated zone	 1.00 0.99	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 0.99
Toccoa	10	Very limited Flooding	 1.00	Somewhat limited Flooding Depth to saturated zone Cutbanks cave	 0.80 0.73 0.10	Very limited Flooding	 1.00
CoB:							
Cowarts	85	Not limited		Somewhat limited Too clayey Cutbanks cave	 0.32 0.10	Not limited	
CoC:							
Cowarts	80	Not limited		Somewhat limited Too clayey Cutbanks cave	 0.32 0.10	Not limited	
CrD:							
Cowarts	75	Somewhat limited Slope	 0.63	Somewhat limited Slope Too clayey Cutbanks cave	 0.63 0.32 0.10	Somewhat limited Slope Gravel content	 0.63 0.02
CwE:							
Cowarts	45	Very limited Slope	 1.00	Very limited Slope Too clayey Cutbanks cave	 1.00 0.32 0.10	Very limited Slope Gravel content	 1.00 0.02

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Uchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00		
				Depth to saturated zone	0.82		
DAM:							
Dam	100	Not rated		Not rated		Not rated	
EnB:							
Enon	70	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Too clayey	0.50	Gravel content	0.07
		Low strength	1.00	Cutbanks cave	0.10		
Wynott	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.50	Gravel content	0.47
		Shrink-swell	1.00	Cutbanks cave	0.10	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
EuA:							
Eunola	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
FaA:							
Fluvaquents	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
GrA:							
Greenville	90	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.08	Too clayey	0.12		
				Cutbanks cave	0.10		
GrB:							
Greenville	90	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.08	Too clayey	0.12		
				Cutbanks cave	0.10		
GuB:							
Greenville	60	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.08	Too clayey	0.12		
				Cutbanks cave	0.10		
Urban land	30	Not rated		Not rated		Not rated	
GvD2:							
Gwinnett	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
				Too clayey	0.12		
				Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Lloyd	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
		Low strength	0.10	Too clayey	0.28		
				Cutbanks cave	0.10		
GwE2:							
Gwinnett	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10		
Agricola	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.10	Cutbanks cave	0.10	Gravel content	0.41
				Depth to soft bedrock	0.10	Depth to bedrock	0.10
HdB:							
Hard Labor	90	Somewhat limited		Very limited		Not limited	
		Low strength	0.10	Depth to saturated zone	0.99		
				Too clayey	0.32		
				Cutbanks cave	0.10		
HdC:							
Hard Labor	80	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.10	Depth to saturated zone	0.99	Slope	0.01
		Slope	0.01				
				Too clayey	0.32		
				Cutbanks cave	0.10		
HiB2:							
Hiwassee	80	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
KnA:							
Kinston	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to	1.00
						saturated zone	0
		Flooding	1.00	Flooding	0.80		
				Cutbanks cave	0.10		
Iuka	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	1.00		
				Flooding	0.80		
LdB2:							
Lloyd	90	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.10	Too clayey	0.28		
				Cutbanks cave	0.10		
LnB:							
Lloyd	55	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.10	Too clayey	0.28		
				Cutbanks cave	0.10		
Urban land	35	Not rated		Not rated		Not rated	

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
LoF:							
Louisa	65	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Cutbanks cave	0.10	Droughty	0.97
Mountain Park	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.29	Depth to bedrock	0.29
				Cutbanks cave	0.10	Droughty	0.0
LrD:							
Louisburg	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
				Cutbanks cave	0.10	Large stones content	0.32
Rion	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
				Cutbanks cave	0.10	Gravel content	0.02
Rock outcrop	10	Not rated		Not rated		Not rated	
LrE:							
Louisburg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Large stones content	0.32
Rion	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Gravel content	0.02
Rock outcrop	10	Not rated		Not rated		Not rated	
MaB2:							
Madison	80	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.10	Cutbanks cave	0.10		
MaD2:							
Madison	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
		Low strength	0.10	Cutbanks cave	0.10		
MdE2:							
Madison	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.10	Cutbanks cave	0.10		
Louisa	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Cutbanks cave	0.10	Droughty	0.97

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MnA:							
Marvyn----------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
MrB:							
Marvyn----------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
				Too clayey	0.04		
MwB2:							
Mecklenburg-----------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.50		
		Shrink-swell	0.50	Cutbanks cave	0.10		
MxD2:							
Mecklenburg-----------	80	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.12		
		Slope	0.37	Cutbanks cave	0.10		
PaC2:							
Pacolet---------------	80	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.10	Too clayey	0.50		
				Cutbanks cave	0.10		
PrD2:							
Pacolet---------------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Too clayey	0.50	Slope	0.37
		Low strength	0.10	Slope	0.37		
				Cutbanks cave	0.10		
Rion------------------	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
				Cutbanks cave	0.10	Gravel content	0.02
PrE2:							
Pacolet---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.10	Too clayey	0.50	Large stones content	0.32
				Cutbanks cave	0.10		
Rion------------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Gravel content	0.02
Pt:							
Pits------------------	90	Not rated		Not rated		Not rated	
SgD:							
Springhill------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
				Cutbanks cave	0.10		
TbD2:							
Tallapoosa------------	40	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.70
		Low strength	1.00	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Badin---------------	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.64	Depth to bedrock	0.65
		Shrink-swell	0.50			Slope	0.37
		Slope	0.37	Slope	0.37		
				Cutbanks cave	0.10		
Fruithurst----------	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.46	Depth to bedrock	0.46
		Slope	0.37			Slope	0.37
				Slope	0.37		
				Cutbanks cave	0.10		
TfE2:							
Tallapoosa----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00			Depth to bedrock	1.00
				Slope	1.00	Droughty	0.70
		Low strength	1.00	Cutbanks cave	0.10		
Fruithurst----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to soft bedrock	0.46	Depth to bedrock	0.46
						Gravel content	0.05
				Cutbanks cave	0.10		
ToA:							
Toccoa--------------	80	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.73	Flooding	0.60
				Flooding	0.60		
				Cutbanks cave	0.10		
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
WeC2:							
Wedowee-------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.10	Too clayey	0.12	Large stones content	0.32
		Slope	0.01	Cutbanks cave	0.10		
				Slope	0.01	Slope	0.01
WeD2:							
Wedowee-------------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
		Low strength	0.10	Too clayey	0.12	Large stones content	0.32
				Cutbanks cave	0.10		
WfE:							
Wedowee-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.10	Too clayey	0.12	Large stones content	0.32
				Cutbanks cave	0.10		
WgC:							
Wedowee-------------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.10	Too clayey	0.12	Large stones content	0.32
		Slope	0.01	Cutbanks cave	0.10		
				Slope	0.01	Slope	0.01

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Saw-----------------	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.15	Depth to hard bedrock	1.00	Depth to bedrock	0.16
		Low strength	0.10	Too clayey	0.28	Slope	0.01
		Slope	0.01	Cutbanks cave	0.10	Droughty	0.01
WhA:							
Wehadkee------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
WkA:							
Wickham-------------	80	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Cutbanks cave	0.10		
WkB:							
Wickham-------------	90	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Cutbanks cave	0.10		
WnD:							
Wynott--------------	60	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.50	Gravel content	0.36
		Shrink-swell	1.00	Slope	0.16	Slope	0.16
		Slope	0.16	Cutbanks cave	0.10	Depth to bedrock	0.01
Winnsboro-----------	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.50	Slope	0.16
		Shrink-swell	1.00	Slope	0.16	Gravel content	0.11
		Slope	0.16	Cutbanks cave	0.10	Large stones content	0.01
WyE:							
Wynott--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.50	Gravel content	0.36
		Shrink-swell	1.00	Cutbanks cave	0.10	Depth to bedrock	0.01
Wilkes--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Cutbanks cave	0.10	Droughty	0.98

Sewage Disposal

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AlA:					
Altavista	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Flooding	0.40
AtB:					
Altavista	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Flooding	0.40
BdB2:					
Badin	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.98	Slope	0.32
				Seepage	0.02
Tatum	30	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
				Slope	0.32
Tallapoosa	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
				Seepage	0.50
				Slope	0.32
BfC:					
Badin	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.98	Slope	1.00
		Slope	0.01	Seepage	0.02
Tallapoosa	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.01	Slope	1.00
				Seepage	0.50
Fruithurst	10	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.01	Seepage	0.50

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
BuA:					
Buncombe	70	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00		
CdB:					
Cecil	60	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
Urban land	30	Not rated		Not rated	
CeB2:					
Cecil	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
CeC2:					
Cecil	80	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.01		
CHA:					
Chewacla	55	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
Cartecay	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Toccoa	10	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	0.92
		Seepage, bottom layer	1.00		
CoB:					
Cowarts	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.32
				Slope	0.32
CoC:					
Cowarts	80	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.32

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
CrD:					
Cowarts	75	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.63	Seepage	0.32
CwE:					
Cowarts	45	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	0.32
Uchee	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	1.0
		Slow water movement	1.00		
DAM:					
Dam	100	Not rated		Not rated	
EnB:					
Enon	70	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.32
Wynott	20	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	0.32
				Seepage	0.18
EuA:					
Eunola	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
FaA:					
Fluvaquents	90	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Slow water movement	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
GrA:					
Greenville	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
GrB:					
Greenville	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GuB:					
Greenville----------	60	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.08
Urban land----------	30	Not rated		Not rated	
GvD2:					
Gwinnett------------	45	Somewhat limited		Very limited	
		Depth to bedrock	0.94	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.84
		Slope	0.37	Seepage	0.50
Lloyd---------------	35	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
GwE2:					
Gwinnett------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.94	Depth to soft bedrock	0.84
		Slow water movement	0.50	Seepage	0.50
Agricola------------	30	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00		
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
HdB:					
Hard Labor----------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Slope	0.32
HdC:					
Hard Labor----------	80	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Slope	1.00
		Slope	0.01		
HiB2:					
Hiwassee------------	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
KnA:					
Kinston-------------	60	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	1.00

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Iuka	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
LdB2:					
Lloyd	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
LnB:					
Lloyd	55	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
Urban land	35	Not rated		Not rated	
LoF:					
Louisa	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Mountain Park	20	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
LrD:					
Louisburg	45	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.37	Slope	1.00
Rion	35	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37		
Rock outcrop	10	Not rated		Not rated	
LrE:					
Louisburg	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rion	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Rock outcrop--------	10	Not rated		Not rated	
MaB2:					
Madison-------------	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
MaD2:					
Madison-------------	75	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
MdE2:					
Madison-------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Louisa--------------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00		
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
MnA:					
Marvyn--------------	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Seepage	0.50
MrB:					
Marvyn--------------	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.08
MwB2:					
Mecklenburg---------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
				Slope	0.32
MxD2:					
Mecklenburg---------	80	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.50
		Slope	0.37		
PaC2:					
Pacolet-------------	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.98
				Seepage	0.50
PrD2:					
Pacolet-------------	55	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Rion----------------	25	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37		
PrE2:					
Pacolet-------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rion----------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Pt:					
Pits----------------	90	Not rated		Not rated	
SgD:					
Springhill----------	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63	Slope	1.00
		Slow water movement	0.50		
TbD2:					
Tallapoosa----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	1.00
				Seepage	0.50
Badin---------------	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.98	Slope	1.00
		Slope	0.37	Seepage	0.02
Fruithurst----------	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
TfE2:					
Tallapoosa----------	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Fruithurst----------	30	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
ToA:					
Toccoa--------------	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom	1.00	Depth to saturated zone	0.92
Ur:					
Urban land----------	85	Not rated		Not rated	
WeC2:					
Wedowee-------------	80	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.01	Seepage	0.50
WeD2:					
Wedowee-------------	75	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
WfE:					
Wedowee-------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
WgC:					
Wedowee-------------	60	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.01	Seepage	0.50
Saw-----------------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.01	Slope	1.00
WhA:					
Wehadkee------------	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
WkA:					
Wickham-------------	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
		Flooding	0.40	Flooding	0.40

Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
WkB:					
Wickham	90	Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	0.50
		Slow water movement	0.50	Flooding	0.40
		Flooding	0.40	Slope	0.3
WnD:					
Wynott	60	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.16	Seepage	0.18
Winnsboro	20	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
		Slope	0.16		
WyE:					
Wynott	65	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	0.18
Wilkes	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00

Landfills

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AlA:							
Altavista-----------	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
		Too clayey	0.50				
AtB:							
Altavista-----------	80	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
		Too clayey	0.50				
BdB2:							
Badin---------------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	1.00
Tatum---------------	30	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Tallapoosa----------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
BfC:							
Badin---------------	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.01	Hard to compact	1.00
		Slope	0.01			Depth to bedrock	1.00
Tallapoosa----------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
Fruithurst----------	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
BuA:							
Buncombe------------	70	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	0.50
		Too sandy	0.50				

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CdB:							
Cecil----------------	60	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
Urban land----------	30	Not rated		Not limited		Not rated	
CeB2:							
Cecil----------------	80	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
CeC2:							
Cecil----------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Hard to compact	0.50
						Slope	0.01
CHA:							
Chewacla------------	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50				
Cartecay------------	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00		
Toccoa--------------	10	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
CoB:							
Cowarts-------------	85	Not limited		Not limited		Not limited	
CoC:							
Cowarts-------------	80	Not limited		Not limited		Not limited	
CrD:							
Cowarts-------------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
CwE:							
Cowarts-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uchee---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00		
		Depth to saturated zone	0.09				

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DAM:							
Dam	100	Not rated		Not rated		Not rated	
EnB:							
Enon	70	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Wynott	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	1.00
EuA:							
Eunola	80	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage, bottom layer	1.00			Seepage	0.50
FaA:							
Fluvaquents	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
GrA:							
Greenville	90	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
GrB:							
Greenville	90	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
GuB:							
Greenville	60	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
Urban land	30	Not rated		Not limited		Not rated	
GvD2:							
Gwinnett	45	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.84	Depth to bedrock	0.84
		Slope	0.37	Slope	0.37	Slope	0.37
Lloyd	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Hard to compact	0.50
						Slope	0.37
GwE2:							
Gwinnett	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.84	Depth to bedrock	0.84

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Agricola------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50				
HdB:							
Hard Labor----------	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47
HdC:							
Hard Labor----------	80	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.47 7
		Slope	0.01			Slope	0.01
HiB2:							
Hiwassee------------	80	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
KnA:							
Kinston-------------	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
				Seepage	1.00		
Iuka----------------	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00				
LdB2:							
Lloyd---------------	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
LnB:							
Lloyd---------------	55	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
Urban land----------	35	Not rated		Not limited		Not rated	
LoF:							
Louisa--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
Mountain Park-------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
LrD:							
Louisburg-----------	45	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
Rion----------------	35	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
Rock outcrop--------	10	Not rated		Somewhat limited		Not rated	
				Slope	0.37		
LrE:							
Louisburg-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Rion----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Rock outcrop--------	10	Not rated		Very limited		Not rated	
				Slope	1.00		
MaB2:							
Madison-------------	80	Not limited		Not limited		Not limited	
MaD2:							
Madison-------------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
MdE2:							
Madison-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Louisa--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
MnA:							
Marvyn--------------	90	Not limited		Not limited		Not limited	
MrB:							
Marvyn--------------	90	Not limited		Not limited		Not limited	
MwB2:							
Mecklenburg---------	90	Not limited		Not limited		Not limited	
MxD2:							
Mecklenburg---------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaC2:							
Pacolet-------------	80	Not limited		Not limited		Somewhat limited	
						Too clayey	0.50
PrD2:							
Pacolet-------------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Too clayey	0.50
						Slope	0.37
Rion----------------	25	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
PrE2:							
Pacolet-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Too clayey	0.50
Rion----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Pt:							
Pits----------------	90	Not rated		Not limited		Not rated	
SgD:							
Springhill----------	80	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
TbD2:							
Tallapoosa----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
Badin---------------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to bedrock	1.00
Fruithurst----------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
TfE2:							
Tallapoosa----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Fruithurst----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
ToA:							
Toccoa--------------	80	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
Ur:							
Urban land----------	85	Not rated		Not limited		Not rated	
WeC2:							
Wedowee-------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.01	Slope	0.01	Slope	0.01
WeD2:							
Wedowee-------------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
WfE:							
Wedowee-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WgC:							
Wedowee-------------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.01	Slope	0.01	Slope	0.01
Saw-----------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too clayey	0.50
		Too clayey	0.50	Slope	0.01	Hard to compact	0.50
WhA:							
Wehadkee------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
WkA:							
Wickham-------------	80	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Flooding	0.40		
WkB:							
Wickham-------------	90	Very limited		Somewhat limited		Not limited	
		Seepage, bottom layer	1.00	Flooding	0.40		
		Flooding	0.40				
WnD:							
Wynott--------------	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.16	Hard to compact	1.00
		Slope	0.16			Depth to bedrock	1.00
Winnsboro-----------	20	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Slope	0.16	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.05	Slope	0.16
		Slope	0.16			Depth to bedrock	0.05

Landfills—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
WyE:							
Wynott---------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
Wilkes---------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00

Source of Gravel and Sand

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AlA:					
Altavista	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
AtB:					
Altavista	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BdB2:					
Badin	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Tatum	30	Not rated		Poor	
		Bottom layer	0.00	Thickest layer	0.00
				Bottom layer	0.00
Tallapoosa	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BfC:					
Badin	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Tallapoosa	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Fruithurst	10	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BuA:					
Buncombe	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.39
CdB:					
Cecil	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Urban land	30	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
CeB2:					
Cecil----------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CeC2:					
Cecil----------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CHA:					
Chewacla-------------	55	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Cartecay-------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Toccoa---------------	10	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CoB:					
Cowarts--------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CoC:					
Cowarts--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CrD:					
Cowarts--------------	75	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CwE:					
Cowarts--------------	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Uchee----------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DAM:					
Dam------------------	100	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
EnB:					
Enon-----------------	70	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Wynott---------------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
EuA:					
Eunola	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
FaA:					
Fluvaquents	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GrA:					
Greenville	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GrB:					
Greenville	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GuB:					
Greenville	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Urban land	30	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
GvD2:					
Gwinnett	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Lloyd	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GwE2:					
Gwinnett	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Agricola	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
HdB:					
Hard Labor	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
HdC:					
Hard Labor	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
HiB2:					
Hiwassee	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
KnA:					
Kinston-------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Iuka----------------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.01
LdB2:					
Lloyd---------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LnB:					
Lloyd---------------	55	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Urban land----------	35	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
LoF:					
Louisa--------------	65	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Mountain Park-------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LrD:					
Louisburg-----------	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rion----------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rock outcrop--------	10	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
LrE:					
Louisburg-----------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rion----------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rock outcrop--------	10	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
MaB2:					
Madison-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
MaD2:					
Madison-------------	75	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MdE2:					
Madison-------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Louisa--------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MnA:					
Marvyn--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MrB:					
Marvyn--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MwB2:					
Mecklenburg---------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MxD2:					
Mecklenburg---------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PaC2:					
Pacolet-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PrD2:					
Pacolet-------------	55	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rion----------------	25	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PrE2:					
Pacolet-------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Rion----------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Pt:					
Pits----------------	90	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
SgD:					
Springhill----------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
TbD2:					
Tallapoosa----------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Badin---------------	25	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Fruithurst----------	25	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
TfE2:					
Tallapoosa----------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Fruithurst----------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
ToA:					
Toccoa--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Ur:					
Urban land----------	85	Not rated		Not rated	
		Bottom layer	0.00	Bottom layer	0.00
WeC2:					
Wedowee-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WeD2:					
Wedowee-------------	75	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WfE:					
Wedowee-------------	75	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WgC:					
Wedowee-------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Saw-----------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
WhA:					
Wehadkee------------	75	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WkA:					
Wickham-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WkB:					
Wickham-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WnD:					
Wynott--------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Winnsboro-----------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WyE:					
Wynott--------------	65	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Wilkes--------------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Source of Reclamation Material, Roadfill, and Topsoil

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
AlA:							
Altavista-----------	90	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.22	Wetness depth	0.53
				Wetness depth	0.53	Too acid	0.76
		Too acid	0.20				6
AtB:							
Altavista-----------	80	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.22	Wetness depth	0.53
				Wetness depth	0.53	Too acid	0.76
		Too acid	0.20				
BdB2:							
Badin---------------	40	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.12	Low strength	0.00	Depth to bedrock	0.35
				Shrink-swell	0.99	Rock fragments	0.50
		Depth to bedrock	0.35				
Tatum---------------	30	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Rock fragments	0.88
						Too acid	0.88
		Too acid	0.50				
Tallapoosa----------	20	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Too acid	0.88
		Organic matter content low	0.12				
BfC:							
Badin---------------	60	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.12	Low strength	0.00	Depth to bedrock	0.35
				Shrink-swell	0.99	Rock fragments	0.50
		Depth to bedrock	0.35				
Tallapoosa----------	20	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Too acid	0.88
		Organic matter content low	0.12			Slope	0.99
Fruithurst----------	10	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Depth to bedrock	0.54
				Low strength	0.00	Too acid	0.88
		Too acid	0.50			Slope	0.99
		Depth to bedrock	0.54			Slope	0.99

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BuA:							
Buncombe------------	70	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.02
		Too sandy	0.02				
		Organic matter content low	0.12				
CdB:							
Cecil---------------	60	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32				
Urban land----------	30	Not rated		Not rated		Not rated	
CeB2:							
Cecil---------------	80	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32				
CeC2:							
Cecil---------------	80	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32			Slope	0.99
CHA:							
Chewacla------------	55	Fair		Poor		Poor	
		Too acid	0.68	Low strength	0.00	Wetness depth	0.00
				Wetness depth	0.00		
Cartecay------------	30	Fair		Poor		Poor	
		Too acid	0.84	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.88			Rock fragments	0.97
Toccoa--------------	10	Fair		Good		Good	
		Too acid	0.84				
		Organic matter content low	0.88				
CoB:							
Cowarts-------------	85	Poor		Good		Fair	
		Wind erosion	0.00			Too clayey	0.51
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32				
CoC:							
Cowarts-------------	80	Poor		Good		Fair	
		Wind erosion	0.00			Too clayey	0.51
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
CrD:							
Cowarts	75	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
		Too acid	0.32			Too clayey	0.51
		Too clayey	0.88			Too acid	0.88
CwE:							
Cowarts	45	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.50	Slope	0.00
		Organic matter content low	0.12			Too clayey	0.51
						Too acid	0.88
		Too acid	0.32				
Uchee	35	Poor		Fair		Poor	
		Wind erosion	0.00	Low strength	0.10	Slope	0.00
		Too sandy	0.00	Slope	0.50	Too sandy	0.00
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.88
DAM:							
Dam	100	Not rated		Not rated		Not rated	
EnB:							
Enon	70	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.00	Rock fragments	0.50
		Too acid	0.97				
Wynott	20	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Depth to bedrock	0.99
				Shrink-swell	0.58		
		Too acid	0.54				
EuA:							
Eunola	80	Fair		Fair		Fair	
		Too acid	0.32	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.68			Too acid	0.88
FaA:							
Fluvaquents	90	Fair		Poor		Poor	
		Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.88	Low strength	0.00	Too acid	0.59
		Water erosion	0.99				
GrA:							
Greenville	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.22	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.98
		Too acid	0.50				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
GrB:							
Greenville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.22	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.98
		Too acid	0.50				
GuB:							
Greenville----------	60	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.22	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.98
		Too acid	0.50				
Urban land----------	30	Not rated		Not rated		Not rated	
GvD2:							
Gwinnett------------	45	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.16	Too clayey	0.28
						Slope	0.63
		Too clayey	0.50			Slope	0.63
		Too acid	0.68				
Lloyd---------------	35	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.68				
GwE2:							
Gwinnett------------	50	Fair		Fair		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.16	Slope	0.00
				Slope	0.50	Too clayey	0.28
		Too clayey	0.50				
		Too acid	0.68				
Agricola------------	30	Fair		Poor		Poor	
		Organic matter content low	0.08	Depth to bedrock	0.00	Slope	0.00
				Low strength	0.10	Too clayey	0.
		Too clayey	0.50	Slope	0.50	Depth to bedrock	0.90
		Droughty	0.71				
HdB:							
Hard Labor----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.78	Too clayey	0.00
		Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
						Too acid	0.98
		Too acid	0.54				
HdC:							
Hard Labor----------	80	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.78	Too clayey	0.00
		Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
						Too acid	0.98
		Too acid	0.54				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
HiB2:							
Hiwassee	80	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.68				
KnA:							
Kinston	60	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.50			Too acid	0.88
Iuka	30	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.50			Too acid	0.88
		Too sandy	0.99			Too sandy	0.99
LdB2:							
Lloyd	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12				
		Too acid	0.68				
LnB:							
Lloyd	55	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12				
		Too acid	0.68				
Urban land	35	Not rated		Not rated		Not rated	
LoF:							
Louisa	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.88
Mountain Park	20	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Depth to bedrock	0.71
		Droughty	0.15			Too acid	0.92
		Too acid	0.16				
LrD:							
Louisburg	45	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.63
						Too acid	0.98
		Too acid	0.54				
Rion	35	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.54				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Rock outcrop	10	Not rated		Not rated		Not rated	
LrE:							
Louisburg	40	Fair		Fair		Poor	
		Organic matter content low	0.02	Slope	0.18	Slope	0.00
		Too acid	0.54			Too acid	0.98
Rion	40	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.18	Slope	0.00
		Too acid	0.54				
Rock outcrop	10	Not rated		Not rated		Not rated	
MaB2:							
Madison	80	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
MaD2:							
Madison	75	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.02			Slope	0.63
		Too acid	0.50			Too acid	0.88
MdE2:							
Madison	60	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.18	Slope	0.00
		Organic matter content low	0.02			Too clayey	0.00
		Too acid	0.50			Too acid	0.88
Louisa	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Organic matter content low	0.12	Slope	0.18	Rock fragments	0.88
MnA:							
Marvyn	90	Poor		Good		Fair	
		Organic matter content low	0.00			Too acid	0.98
		Too acid	0.54				
MrB:							
Marvyn	90	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.98
		Organic matter content low	0.50				
		Too acid	0.54				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MwB2:							
Mecklenburg---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.02				
		Too acid	0.92				
MxD2:							
Mecklenburg---------	80	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.02			Slope	0.63
		Too acid	0.92				
PaC2:							
Pacolet-------------	80	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.98
		Too acid	0.54				
PrD2:							
Pacolet-------------	55	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.98
		Too acid	0.54				
Rion----------------	25	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.54				
PrE2:							
Pacolet-------------	60	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.50	Slope	0.00
		Organic matter content low	0.12			Too clayey	0.00
						Too acid	0.98
		Too acid	0.54				
Rion----------------	30	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.54				
Pt:							
Pits----------------	90	Not rated		Not rated		Not rated	
SgD:							
Springhill----------	80	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
		Too acid	0.32			Too acid	0.88

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
TbD2:							
Tallapoosa----------	40	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Slope	0.63
		Organic matter content low	0.12			Too acid	0.88
Badin---------------	25	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.12	Low strength	0.00	Depth to bedrock	0.35
				Shrink-swell	0.99	Rock fragments	0.50
		Depth to bedrock	0.35				
Fruithurst----------	25	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Depth to bedrock	0.54
				Low strength	0.00	Slope	0.63
		Too acid	0.50			Too acid	0.88
		Depth to bedrock	0.54				
TfE2:							
Tallapoosa----------	60	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Depth to bedrock	0.00
		Organic matter content low	0.12	Low strength	0.00	Too acid	0.88
Fruithurst----------	30	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Depth to bedrock	0.54
		Too acid	0.50	Low strength	0.00	Too acid	0.88
		Depth to bedrock	0.54				
ToA:							
Toccoa--------------	80	Fair		Good		Good	
		Too acid	0.84				
		Organic matter content low	0.88				
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
WeC2:							
Wedowee-------------	80	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.59
						Slope	0.99
		Too acid	0.50				
WeD2:							
Wedowee-------------	75	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.59
						Slope	0.63
		Too acid	0.50				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
WfE:							
Wedowee-------------	75	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12			Too clayey	0.00
		Too acid	0.50			Too acid	0.59
WgC:							
Wedowee-------------	60	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.59
		Too acid	0.50			Slope	0.99
Saw-----------------	30	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.12	Low strength	0.10	Depth to bedrock	0.84
		Droughty	0.22			Slope	0.99
WhA:							
Wehadkee------------	75	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.88			Rock fragments	0.88
		Water erosion	0.99				
WkA:							
Wickham-------------	80	Fair		Good		Fair	
		Organic matter content low	0.50			Too acid	0.98
		Too acid	0.54				
WkB:							
Wickham-------------	90	Fair		Good		Fair	
		Organic matter content low	0.50			Too acid	0.98
		Too acid	0.54				
WnD:							
Wynott--------------	60	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.84
		Too acid	0.54	Shrink-swell	0.58	Depth to bedrock	0.99
Winnsboro-----------	20	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.73	Slope	0.84
				Depth to bedrock	0.95		
WyE:							
Wynott--------------	65	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Too clayey	0.00
		Too acid	0.54	Slope	0.02	Depth to bedrock	0.99

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Wilkes--------------	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Too clayey	0.00	Slope	0.02	Too clayey	0.00

Ponds and Embankments

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
AlA:							
Altavista-----------	90	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	0.10
				Piping	0.96	Depth to saturated zone	0.01
				Seepage	0.06		
AtB:							
Altavista-----------	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	0.10
		Slope	0.08	Piping	0.99	Depth to saturated zone	0.01
				Seepage	0.06		
BdB2:							
Badin---------------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.19	Thin layer	0.91	Depth to water	1.00
		Depth to bedrock	0.17				
		Slope	0.08				
Tatum---------------	30	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.08				
Tallapoosa----------	20	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.61	Thin layer	1.00	Depth to water	1.00
		Slope	0.08	Piping	0.84		
BfC:							
Badin---------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.91	Depth to water	1.00
		Seepage	0.19				
		Depth to bedrock	0.17				
Tallapoosa----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Piping	0.84		
Fruithurst----------	10	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.32		
		Depth to bedrock	0.11				
BuA:							
Buncombe------------	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
CdB:							
Cecil---------------	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.05	Depth to water	1.00
		Slope	0.08	Seepage	0.03		
Urban land----------	30	Somewhat limited		Not rated		Not rated	
		Slope	0.08				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CeB2:							
Cecil---------------	80	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.08	Seepage	0.03		
CeC2:							
Cecil---------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.85	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
CHA:							
Chewacla------------	55	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.58		
Cartecay------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.05		
Toccoa--------------	10	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Seepage	0.03	Depth to saturated zone	0.68
				Depth to saturated zone	0.02		
						Cutbanks cave	0.10
CoB:							
Cowarts-------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
		Slope	0.08				
CoC:							
Cowarts-------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Depth to water	1.00
		Seepage	0.57				
CrD:							
Cowarts-------------	75	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.57				
CwE:							
Cowarts-------------	45	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.57				
Uchee---------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.09	Depth to water	1.00
		Slope	1.00				
				Seepage	0.03		
DAM:							
Dam-----------------	100	Not rated		Not rated		Not rated	
EnB:							
Enon----------------	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.08	Hard to pack	0.69	Depth to water	1.00

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
Wynott	20	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.43	Thin layer	0.56	Depth to water	1.00
		Slope	0.08	Hard to pack	0.33		
		Depth to bedrock	0.02				
EuA:							
Eunola	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	0.10
				Seepage	0.03	Depth to saturated zone	0.01
FaA:							
Fluvaquents	90	Not limited		Very limited		Somewhat limited	
				Ponding	1.00	Cutbanks cave	0.10
				Depth to saturated zone	1.00		
				Piping	0.99		
GrA:							
Greenville	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.54	Depth to water	1.00
				Seepage	0.04		
GrB:							
Greenville	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.54	Depth to water	1.00
		Slope	0.08	Seepage	0.04		
GuB:							
Greenville	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.54	Depth to water	1.00
				Seepage	0.04		
Urban land	30	Not limited		Not rated		Not rated	
GvD2:							
Gwinnett	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.36	Depth to water	1.00
		Seepage	0.70	Thin layer	0.26		
		Depth to bedrock	0.01	Seepage	0.05		
Lloyd	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.08	Depth to water	1.00
		Seepage	0.70				
GwE2:							
Gwinnett	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.41	Depth to water	1.00
		Seepage	0.70	Thin layer	0.26		
		Depth to bedrock	0.01	Seepage	0.05		
Agricola	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.70	Depth to water	1.00
		Seepage	0.70	Hard to pack	0.01		
		Depth to bedrock	0.04				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HdB:							
Hard Labor----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.08	Piping	0.94	Slow refill	0.95
		Seepage	0.05	Depth to saturated zone	0.86	Cutbanks cave	0.10
						Depth to saturated zone	0.06
HdC:							
Hard Labor----------	80	Very limited		Somewhat limited		Somewhat limited	
		Slope	1.00	Piping	0.94	Slow refill	0.95
		Seepage	0.05	Depth to saturated zone	0.86	Cutbanks cave	0.10
						Depth to saturated zone	0.06
HiB2:							
Hiwassee------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.95	Depth to water	1.00
		Slope	0.08				
KnA:							
Kinston-------------	60	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
Iuka----------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.10		
LdB2:							
Lloyd---------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.08	Depth to water	1.00
		Slope	0.08				
LnB:							
Lloyd---------------	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.08	Depth to water	1.00
		Slope	0.08				
Urban land----------	35	Somewhat limited		Not rated		Not rated	
		Slope	0.08				
LoF:							
Louisa--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.58	Piping	0.02		
Mountain Park-------	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.81	Depth to water	1.00
		Seepage	0.70	Seepage	0.01		
		Depth to bedrock	0.08				
LrD:							
Louisburg-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	1.00				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
Rion	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.02	Depth to water	1.00
		Slope	1.00				
Rock outcrop	10	Very limited		Not rated		Not rated	
		Slope	1.00				
LrE:							
Louisburg	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	1.00				
Rion	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.02	Depth to water	1.00
		Slope	1.00				
Rock outcrop	10	Very limited		Not rated		Not rated	
		Slope	1.00				
MaB2:							
Madison	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.06	Depth to water	1.00
		Slope	0.08				
MaD2:							
Madison	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.06	Depth to water	1.00
		Seepage	0.70				
MdE2:							
Madison	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.06	Depth to water	1.00
		Seepage	0.70				
Louisa	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.58	Piping	0.02		
MnA:							
Marvyn	90	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
MrB:							
Marvyn	90	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
MwB2:							
Mecklenburg	90	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.08				
MxD2:							
Mecklenburg	80	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaC2:							
Pacolet-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Seepage	0.03	Depth to water	1.00
		Seepage	0.70				
PrD2:							
Pacolet-------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.03	Depth to water	1.00
		Seepage	0.70				
Rion----------------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.02	Depth to water	1.00
		Slope	1.00				
PrE2:							
Pacolet-------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.03	Depth to water	1.00
		Seepage	0.70				
Rion----------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.02	Depth to water	1.00
		Slope	1.00				
Pt:							
Pits----------------	90	Not limited		Not rated		Not rated	
SgD:							
Springhill----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	1.00				
TbD2:							
Tallapoosa----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Piping	0.84		
Badin---------------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.91	Depth to water	1.00
		Seepage	0.19				
		Depth to bedrock	0.17				
Fruithurst----------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.32		
		Depth to bedrock	0.11				
TfE2:							
Tallapoosa----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Piping	0.84		
Fruithurst----------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.32		
		Depth to bedrock	0.11				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
ToA:							
Toccoa	80	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Seepage	0.03	Depth to saturated zone	0.68
				Depth to saturated zone	0.02	Cutbanks cave	0.10
Ur:							
Urban land	85	Somewhat limited		Not rated		Not rated	
		Slope	0.08				
WeC2:							
Wedowee	80	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
WeD2:							
Wedowee	75	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
WfE:							
Wedowee	75	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
WgC:							
Wedowee	60	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
Saw	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.74	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.74				
WhA:							
Wehadkee	75	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
				Piping	1.00	Cutbanks cave	0.10
				Seepage	0.02		
WkA:							
Wickham	80	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
				Seepage	0.05		
WkB:							
Wickham	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
		Slope	0.08				
WnD:							
Wynott	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.56	Depth to water	1.00
		Seepage	0.43	Hard to pack	0.33		
		Depth to bedrock	0.02				

Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Winnsboro-----------	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.40	Depth to water	1.00
		Seepage	0.05	Thin layer	0.01		
		Depth to bedrock	0.01				
WyE:							
Wynott--------------	65	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.56	Depth to water	1.00
		Seepage	0.43	Hard to pack	0.33		
		Depth to bedrock	0.02				
Wilkes--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.66				

Engineering Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	2
	In				Pct	Pct				
AlA:										
Altavista-------	0-7	Silt loam, sandy loam, loam	SM, SC-SM	A-4	0	0	95-100	90-100	65-99	35
	7-11	Sandy clay loam, fine sandy loam, loam	SC-SM, SC, SM	A-4, A-6	0	0	95-100	90-100	60-99	35
	11-52	Clay loam, sandy clay loam, loam	SC, CL-ML, CL, SC-SM	A-4, A-6, A-7	0	0	95-100	95-100	60-99	45
	52-80	Loam, fine sandy loam, sandy loam	SM, ML, SC-SM	A-4	0	0	95-100	90-100	60-99	35
AtB:										
Altavista-------	0-7	Fine sandy loam, sandy loam, loam	ML, SC-SM, SM	A-4	0	0	95-100	90-100	65-99	35
	7-11	Sandy clay loam, fine sandy loam, loam	SC-SM, SC	A-4, A-6	0	0	95-100	90-100	60-99	35
	11-52	Clay loam, sandy clay loam, loam	CL-ML, CL, SC, SC-SM	A-4, A-6, A-7	0	0	95-100	95-100	60-99	45
	52-80	Loam, fine sandy loam, sandy loam	ML, SM, SC-SM	A-4	0	0	95-100	90-100	60-99	35
BdB2:										
Badin-----------	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	85-100	75-95	65-90	60
	5-20	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	65-100	60-100	55-100	50
	20-28	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95	55
	28-80	Weathered bedrock			---	---	---	---	---	-
Tatum-----------	0-5	Gravelly loam	GM, ML, SM, CL-ML	A-4	0	0	60-80	55-75	45-75	40
	5-10	Loam	CL-ML, GM, ML, SM	A-4	0	0	75-100	75-95	60-95	40
	10-42	Silty clay loam, silty clay, clay	MH, CH	A-7	0	0	75-100	75-95	60-95	55
	42-80	Weathered bedrock			---	---	---	---	---	-
Tallapoosa------	0-4	Gravelly loam	GM, SM, CL-ML	A-2-4, A-4	0	0	70-85	65-75	45-65	30
	4-8	Gravelly loam	GM, SM, CL-ML	A-2-4, A-4	0	0	70-85	65-75	45-65	30
	8-12	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95	55
	12-16	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95	55
	16-80	Weathered bedrock			---	---	---	---	---	-

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40
	In				Pct	Pct			
BfC:									
Badin-----------	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	85-100	75-95	65-90
	5-20	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	65-100	60-100	55-100
	20-28	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95
	28-80	Weathered bedrock			---	---	---	---	---
Tallapoosa------	0-4	Gravelly loam	CL-ML, GM, SM	A-2-4, A-4	0	0-5	70-85	65-75	45-65
	4-8	Gravelly loam	SM, GM, CL-ML	A-2-4, A-4	0	0	70-85	65-75	45-65
	8-12	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95
	12-16	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95
	16-80	Weathered bedrock			---	---	---	---	---
Fruithurst------	0-3	Gravelly loam	SM, SC-SM, ML, CL-ML	A-4	0	0-5	70-85	65-75	45-65
	3-7	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	7-30	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95
	30-80	Weathered bedrock			---	---	---	---	---
BuA:									
Buncombe--------	0-9	Loamy sand, loamy fine sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	98-100	98-100
	9-80	Loamy sand, loamy fine sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	98-100	98-100
CdB:									
Cecil-----------	0-4	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	4-12	Sandy clay loam, clay loam	SC, SM, ML, CL	A-4, A-6	0	0	75-100	75-100	68-95
	12-39	Clay, clay loam	CH, ML, MH	A-5, A-7	0	0	97-100	92-100	72-100
	39-64	Clay loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	75-100	75-100	68-95
	64-80	Sandy loam, fine sandy loam, loam	SC-SM, SM	A-2-4, A-4	0	0	80-100	70-100	60-80
Urban land------	0-6	Variable			---	---	---	---	---

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40
	In				Pct	Pct			
CeB2:									
Cecil-----------	0-4	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	4-12	Sandy clay loam, clay loam	SC, CL	A-4, A-6	0	0	75-100	75-100	68-95
	12-39	Clay, clay loam	MH	A-7	0	0	97-100	92-100	72-100
	39-64	Clay loam, sandy clay loam	ML, SM, SC, CL	A-4, A-6	0	0	75-100	75-100	68-95
	64-80	Sandy loam, fine sandy loam, loam	SC-SM, SM	A-2-4, A-4	0	0	80-100	70-100	60-80
CeC2:									
Cecil-----------	0-4	Sandy loam, fine sandy loam, loam	SC-SM, SM	A-2, A-4	0	0	84-100	80-100	67-90
	4-12	Sandy clay loam, clay loam	SM, CL, ML, SC	A-4, A-6	0	0	75-100	75-100	68-95
	12-39	Clay, clay loam	MH	A-5, A-7	0	0	97-100	92-100	72-100
	39-64	Clay loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	75-100	75-100	68-95
	64-80	Sandy loam, fine sandy loam, loam	SC-SM, SM	A-2-4, A-4	0	0	80-100	70-100	60-80
CHA:									
Chewacla--------	0-6	Silt loam, silty clay loam, clay loam	ML, CL	A-4, A-6, A-7	0	0	96-100	95-100	80-100
	6-20	Silt loam, silty clay loam, clay loam	CL, ML	A-4, A-6, A-7	0	0	96-100	95-100	80-100
	20-27	Sandy clay loam, loam, sandy loam	CL-ML	A-4, A-6, A-7-6	0	0	96-100	95-100	60-100
	27-53	Silt loam, clay loam, silty clay loam	CH, CL, ML, MH	A-4, A-6, A-7	0	0	85-100	75-100	60-100
	53-80	Silt loam, clay loam, silty clay loam	CH, MH, ML, CL	A-4, A-6, A-7	0	0	85-100	75-100	60-100
Cartecay--------	0-3	Sandy clay loam, sandy loam	SC, SC-SM	A-2, A-4, A-2-4	0	0	95-100	95-100	60-85
	3-32	Sandy loam, fine sandy loam, loam	SC-SM, SM, SC	A-2, A-4	0	0	90-100	75-100	60-85
	32-47	Fine sandy loam, loamy fine sand, loamy sand, gravelly fine sandy loam	SC, SM	A-2, A-4	0	0-17	85-100	70-100	30-85
	47-80	Loamy sand, sand, fine sandy loam	SM	A-4, A-2	0	0	80-100	75-95	25-80

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
Toccoa----------	0-4	Fine sandy loam	SM, ML	A-2, A-4	0	0	95-100	95-100	50-85
	4-36	Sandy loam, loam	SM, ML	A-2, A-4	0	0	95-100	90-100	60-100
	36-43	Fine sandy loam, loam, silt loam, sandy loam	SC-SM, ML	A-4	0	0	95-100	90-100	55-100
	43-80	Sandy loam, loam	SM, ML	A-2, A-4	0	0	95-100	90-100	60-100
CoB:									
Cowarts---------	0-3	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	3-9	Fine sandy loam, sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6	0	0	95-100	90-100	60-95
	9-37	Sandy clay loam, sandy clay, clay loam	SC, CL	A-2-6, A-6, A-7	0	0	95-100	90-100	60-95
	37-70	Sandy loam, sandy clay loam, clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6, A-7	0	0	85-100	80-100	60-95
	70-80	Sandy clay, clay, sandy clay loam	CL, CL-ML, SC	A-4, A-6, A-7	0	0	98-100	95-100	75-95
CoC:									
Cowarts---------	0-3	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	3-9	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6	0	0	95-100	90-100	60-95
	9-37	Sandy clay loam, sandy clay, clay loam	SC, CL	A-2-6, A-6, A-7	0	0	95-100	90-100	60-95
	37-70	Sandy loam, sandy clay loam, clay loam	SC, CL, SC-SM, CL-ML	A-2, A-4, A-6, A-7	0	0	85-100	80-100	60-95
	70-80	Sandy clay, clay, sandy clay loam	SC, CL-ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	75-95
CrD:									
Cowarts---------	0-3	Gravelly sandy loam	SM, SC-SM	A-2, A-4	0	0	75-95	60-85	55-75
	3-9	Fine sandy loam, sandy loam, sandy clay loam	SC-SM, SC, SM	A-2, A-4, A-6	0	0	95-100	90-100	60-90
	9-37	Sandy clay loam, sandy clay, clay loam	SC, SM	A-2-6, A-6, A-7	0	0	95-100	90-100	60-90
	37-70	Sandy loam, sandy clay loam, clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6, A-7	0	0	85-100	80-100	60-95
	70-80	Sandy clay, clay, sandy clay loam	SC, CL-ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	75-95

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
CwE:									
Cowarts----------	0-3	Gravelly sandy loam	SM, SC-SM	A-2, A-4	0	0	75-95	60-85	55-75
	3-9	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6	0	0	95-100	90-100	60-95
	9-37	Sandy clay loam, sandy clay, clay loam	SC, CL	A-2-6, A-6, A-7	0	0	95-100	90-100	60-95
	37-70	Sandy loam, sandy clay loam, clay loam	CL-ML, CL, SC, SC-SM	A-2, A-4, A-6, A-7	0	0	85-100	80-100	60-95
	70-80	Sandy clay, clay, sandy clay loam	SC, CL, CL-ML	A-4, A-6, A-7	0	0	98-100	95-100	75-95
Uchee------------	0-6	Loamy sand	SM	A-1-b, A-2	0	0	90-100	80-100	40-70
	6-21	Loamy sand	SM	A-1-b, A-2	0	0	90-100	80-100	40-70
	21-29	Sandy loam, sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0	90-100	80-100	50-80
	29-50	Sandy clay loam, sandy clay, clay	CL, SC	A-7, A-6	0	0	90-100	80-100	65-90
	50-64	Sandy loam, sandy clay loam, sandy clay	CH, CL, SC	A-2-6, A-6, A-7	0	0	85-100	80-100	50-80
	64-80	Sandy loam, loamy sand	SC-SM, SM, SP-SM	A-1-b, A-2	0	0	95-100	90-100	40-70
DAM:									
Dam--------------	---	---	---	---	---	---	---	---	---
EnB:									
Enon-------------	0-4	Very gravelly sandy loam	GM, SM	A-4, A-6	0	0-5	70-85	60-75	50-75
	4-12	Loam, very gravelly sandy clay loam, sandy loam, gravelly sandy loam	SC, GC	A-2, A-4, A-6, A-7	0	0-10	70-85	60-75	30-75
	12-50	Clay	CH	A-7	0	0	99-100	60-100	60-100
	50-80	Loam, sandy clay loam, clay loam	CL-ML	A-4	0	0	98-100	85-100	70-95
Wynott-----------	0-8	Very gravelly sandy loam	CL, CL-ML, ML, SM	A-4	0	0-5	80-100	50-75	40-70
	8-12	Gravelly sandy loam	ML, SM, CL-ML, CL	A-4	0	0-10	80-100	50-75	40-70
	12-32	Clay, clay loam, silty clay	CL, CH	A-7	0	0	85-100	85-100	80-100
	32-38	Sandy clay, sandy clay loam, clay loam	CL, SC	A-6	0	0	85-100	85-100	70-95
	38-80	Weathered bedrock			---	---	---	---	---

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40
	In				Pct	Pct			
EuA:									
Eunola----------	0-8	Sandy loam	SM	A-2, A-4	0	0	100	98-100	60-85
	8-40	Sandy clay loam, clay loam, fine sandy loam	CL, SM, SC, SC-SM	A-2, A-4, A-6	0	0	100	90-100	75-95
	40-80	Sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6	0	0	100	98-100	60-70
FaA:									
Fluvaquents-----	0-6	Sandy loam	CL-ML, SM, ML	A-2, A-4	0	0	100	90-100	60-90
	6-80	Sandy loam	CL-ML	A-4, A-6	0	0	100	90-100	75-100
GrA:									
Greenville------	0-8	Sandy loam	SC-SM, SM, SC	A-2, A-4	0	0	95-100	90-100	65-85
	8-13	Sandy loam, sandy clay loam	SC, SC-SM, CL	A-4, A-6	0	0	98-100	95-100	70-96
	13-80	Clay loam, sandy clay, clay	CL, SC, MH	A-7-6, A-6, A-7	0	0	98-100	95-100	80-99
GrB:									
Greenville------	0-8	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	65-85
	8-13	Sandy loam, sandy clay loam	SC, SC-SM, CL	A-4, A-6	0	0	98-100	95-100	70-96
	13-80	Clay loam, sandy clay, clay	SC, MH, CL	A-7-6, A-6, A-7	0	0	98-100	95-100	80-99
GuB:									
Greenville------	0-8	Sandy loam	CL-ML, SM, SC, SC-SM	A-2, A-4	0	0	95-100	90-100	65-85
	8-13	Sandy loam, sandy clay loam	SC, SC-SM, CL	A-4, A-6	0	0	98-100	95-100	70-96
	13-80	Clay loam, sandy clay, clay	CL, SC	A-4, A-6, A-7	0	0	98-100	95-100	80-99
Urban land------	0-6	Variable			---	---	---	---	---
GvD2:									
Gwinnett--------	0-3	Gravelly sandy loam, fine sandy loam, loam	SC-SM, SM	A-2, A-4	0	0	84-100	80-100	67-90
	3-18	Clay, sandy clay, clay loam	CL, MH, ML, CH	A-6, A-7	0	0	95-100	90-100	75-95
	18-30	Clay, clay loam	CL, SC	A-4, A-6	0	0	90-100	85-100	80-90
	30-45	Sandy loam, loam, sandy clay loam	CL, ML, SC-SM, SM	A-4, A-6, A-7	0	0	90-100	85-99	60-90
	45-80	Weathered bedrock			---	---	---	---	---

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	2
	In				Pct	Pct				
Lloyd----------	0-4	Loam, sandy loam, sandy clay loam	SC-SM, SC, CL	A-4, A-6	0	0	98-100	95-100	70-96	40
	4-43	Clay, silty clay, clay loam	ML, MH	A-7-5, A-7-6	0	0	95-100	95-100	80-100	5
	43-56	Silty clay loam, loam, sandy clay loam	SM, SC-SM, ML, CL	A-4, A-6, A-7	0	0	90-100	85-99	60-90	3
	56-80	Silt loam, sandy loam, loam, sandy clay loam	SC-SM, ML, CL, SM	A-4, A-6, A-7	0	0	90-100	85-99	60-90	3
GwE2:										
Gwinnett--------	0-3	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90	2
	3-18	Clay, sandy clay, clay loam	ML, MH, CL, CH	A-6, A-7	0	0	95-100	90-100	75-95	5
	18-25	Clay, clay loam	CL, SC	A-4, A-6	0	0	90-100	85-100	80-90	3
	25-45	Sandy loam, loam, sandy clay loam	SC-SM, SM, CL, ML	A-4, A-6, A-7	0	0	90-100	85-99	60-90	3
	45-80	Weathered bedrock			---	---	---	---	---	-
Agricola--------	0-2	Gravelly loam	SM, SC, SC-SM	A-1-b, A-2, A-4, A-6	0	0-5	70-85	50-75	40-60	2
	2-6	Gravelly loam	SC-SM, SM, SC	A-1-b, A-2, A-4, A-6	0	0-5	70-85	50-75	40-60	2
	6-35	Clay, sandy clay, clay loam	CL, CH, MH, ML	A-6, A-7	0	0-5	95-100	90-100	75-95	5
	35-80	Weathered bedrock			---	---	---	---	---	-
HdB:										
Hard Labor------	0-2	Loamy sand	SC-SM, SM	A-2, A-4	0	0	86-100	80-100	55-91	2
	2-9	Loamy sand, sandy loam	SM, SC-SM	A-4, A-2	0	0	86-100	80-100	55-91	2
	9-15	Loamy sand, sandy loam	SC-SM, SM	A-4, A-2	0	0	86-100	80-100	55-91	2
	15-45	Sandy clay, clay loam, clay	CL	A-7, A-6	0	0	95-100	90-100	70-95	5
	45-80	Sandy clay, clay loam, sandy clay loam	CL, SC	A-4, A-6, A-7	0	0	95-100	85-100	70-90	4
HdC:										
Hard Labor------	0-2	Loamy sand	SC-SM, SM	A-2, A-4	0	0	86-100	80-100	55-91	2
	2-9	Loamy sand, sandy loam	SC-SM, SM	A-4, A-2	0	0	86-100	80-100	55-91	2
	9-15	Loamy sand, sandy loam	SC-SM, SM	A-4, A-2	0	0	86-100	80-100	55-91	2
	15-45	Sandy clay, clay loam, clay	CL	A-7, A-6	0	0	95-100	90-100	70-95	5
	45-80	Sandy clay, clay loam, sandy clay loam	CL, SC	A-4, A-6, A-7	0	0	95-100	85-100	70-90	4

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 2
	In				Pct	Pct				
HiB2:										
Hiwassee--------	0-4	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90	20
	4-80	Clay loam, clay	ML, CL-ML, CL	A-4, A-6, A-7	0	0	90-100	85-99	60-90	30
KnA:										
Kinston---------	0-3	Silt loam	CL-ML	A-4	0	0	100	98-100	55-100	40
	3-7	Silt loam	CL-ML	A-4	0	0	100	98-100	55-100	40
	7-20	Silt loam	CL-ML	A-4	0	0	100	98-100	55-100	40
	20-40	Loam, clay loam, sandy clay loam	CL, SC	A-4, A-6, A-7	0	0	100	95-100	75-100	35
	40-80	Sandy loam, fine sandy loam, loam	SM, ML	A-2, A-4	0	0	95-100	90-100	70-100	25
Iuka------------	0-10	Sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	95-100	90-100	70-100	30
	10-42	Fine sandy loam, loam, sandy loam	ML, CL-ML, SC-SM, SM	A-4	0	0	95-100	85-100	65-100	30
	42-80	Sand, loamy sand, loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	65-96	5
LdB2:										
Lloyd-----------	0-4	Loam, sandy loam, sandy clay loam	SC, CL, SC-SM	A-4, A-6	0	0	98-100	95-100	70-96	40
	4-43	Clay, silty clay, clay loam	ML, MH	A-7-5, A-7-6	0	0	95-100	95-100	80-100	5
	43-56	Silty clay loam, loam, sandy clay loam	SM, SC-SM, ML, CL	A-4, A-6, A-7	0	0	90-100	85-99	60-90	30
	56-80	Silt loam, sandy loam, loam, sandy clay loam	ML, CL, SC-SM, SM	A-4, A-6, A-7	0	0	90-100	85-99	60-90	30
LnB:										
Lloyd-----------	0-4	Loam, sandy loam, sandy clay loam	CL, SC, SC-SM	A-4, A-6	0	0	98-100	95-100	70-96	40
	4-43	Clay, silty clay, clay loam	MH, ML	A-7-5, A-7-6	0	0	95-100	95-100	80-100	5
	43-56	Silty clay loam, loam, sandy clay loam	SC-SM, SM, ML, CL	A-4, A-6, A-7	0	0	90-100	85-99	60-90	30
	56-80	Silt loam, sandy loam, loam, sandy clay loam	ML, CL, SC-SM, SM	A-4, A-6, A-7	0	0	90-100	85-99	60-90	30
Urban land------	0-6	Variable			---	---	---	---	---	-

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
LoF:									
Louisa----------	0-3	Sandy clay loam, loam	SC, CL	A-6, A-2, A-4	0	0	70-95	60-90	50-90
	3-17	Clay loam, loam, sandy clay loam	CL, SC	A-2, A-4	0	0	70-95	60-90	50-90
	17-80	Bedrock			---	---	---	---	---
Mountain Park---	0-4	Gravelly sandy loam	SC-SM, SM	A-2-4, A-4	0	0-7	73-100	63-100	38-70
	4-10	Gravelly sandy loam	SC, SC-SM	A-4, A-2-4	0	0-13	77-100	68-100	41-70
	10-23	Sandy clay loam, clay loam	CL	A-6	0	0-6	88-100	83-100	66-100
	23-32	Sandy loam, sandy clay loam	CL, SC	A-4	0	0-5	90-100	84-100	50-90
	32-46	Bedrock	SC-SM		0	0	100	100	50-75
	46-55	Sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	100	60-70
	55-80	Bedrock			0	0	100	100	50-75
LrD:									
Louisburg-------	0-8	Gravelly sandy loam, gravelly loamy sand	SM, SC-SM, ML	A-2, A-4, A-5	0-10	0-10	75-95	65-80	60-75
	8-15	Gravelly sandy loam, gravelly loamy coarse sand, gravelly loamy sand	MH, ML, SC-SM, SM	A-2, A-4, A-5	0	0-10	75-95	65-80	60-75
	15-35	Loam, sandy loam, coarse sandy loam, sandy clay loam	ML, SM	A-2, A-4, A-5	0	0	85-100	80-100	65-95
	35-80	Sandy loam, coarse sandy loam, fine sandy loam	ML, SC-SM, SM	A-2, A-4, A-5	0	0	85-100	80-100	65-95
Rion------------	0-4	Gravelly sandy loam, gravelly loamy sand	SC-SM, ML, SM, MH	A-2, A-4, A-5	0	0	75-95	65-80	60-75
	4-11	Sandy loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	11-34	Sandy loam, sandy clay loam, loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	34-80	Sandy loam, loamy sand	SC, SM, SC-SM	A-2, A-4, A-6	0	0	90-100	80-100	60-85
Rock outcrop----	---	---	---	---	---	---	---	---	---

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40
	In				Pct	Pct			
LrE:									
Louisburg-------	0-8	Gravelly sandy loam, gravelly loamy sand	SM, SC-SM, ML	A-2, A-4, A-5	0-10	0-10	75-95	65-80	60-75
	8-15	Gravelly sandy loam, gravelly loamy coarse sand, gravelly loamy sand	SC-SM, SM, MH, ML	A-2, A-4, A-5	0	0-10	75-95	65-80	60-75
	15-35	Loam, sandy loam, coarse sandy loam, sandy clay loam	ML, SC-SM, SM	A-2, A-4, A-5	0	0	85-100	80-100	65-95
	35-80	Sandy loam, coarse sandy loam, fine sandy loam	ML, SM	A-2, A-4, A-5	0	0	85-100	80-100	65-95
Rion------------	0-4	Gravelly sandy loam, gravelly loamy sand	MH, ML, SC-SM, SM	A-2, A-4, A-5	0	0	75-95	65-80	60-75
	4-11	Sandy loam, loamy sand	SC, SC-SM, CL-ML, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	11-34	Sandy loam, sandy clay loam, loam	SC, SC-SM, CL-ML, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	34-80	Sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4, A-6	0	0	90-100	80-100	60-85
Rock outcrop----	---	---	---	---	---	---	---	---	---
MaB2:									
Madison---------	0-4	Fine sandy loam	ML, SM	A-2, A-4	0	0	85-100	80-100	60-90
	4-10	Loam, sandy clay loam, clay loam	CL	A-4, A-6	0	0	90-100	85-100	70-95
	10-28	Clay, clay loam, sandy clay	SC, MH	A-7	0	0	90-100	85-100	75-100
	28-80	Fine sandy loam, sandy loam, loam	ML, SM, CL-ML	A-2, A-4	0	0	85-100	80-100	60-90
MaD2:									
Madison---------	0-4	Fine sandy loam	SM, ML	A-2, A-4	0	0	85-100	80-100	60-90
	4-10	Loam, sandy clay loam, clay loam	CL	A-4, A-6	0	0	90-100	85-100	70-95
	10-28	Clay, clay loam, sandy clay	SC, MH	A-7	0	0	90-100	85-100	75-100
	28-80	Fine sandy loam, sandy loam, loam	SM, CL-ML, ML	A-2, A-4	0	0	85-100	80-100	60-90

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40
	In				Pct	Pct			
MdE2:									
Madison---------	0-4	Fine sandy loam	SM	A-2, A-4	0	0	75-95	60-93	50-80
	4-10	Loam, sandy clay loam, clay loam	CL	A-4, A-6	0	0	90-100	85-100	70-95
	10-28	Clay, clay loam, sandy clay	SC, MH	A-7	0	0	90-100	85-100	75-100
	28-80	Fine sandy loam, sandy loam, loam	ML, SM	A-2, A-4	0	0	85-100	80-100	60-90
Louisa----------	0-3	Sandy clay loam, loam	SC, CL	A-6, A-2, A-4	0	0	70-95	60-90	50-90
	3-17	Clay loam, sandy clay loam, loam, gravelly clay loam	SC, CL	A-6, A-2, A-4	0	0	70-95	60-90	50-90
	17-80	Bedrock			---	---	---	---	---
MnA:									
Marvyn----------	0-7	Sandy loam	SC-SM, SM	A-2, A-4	0	0	95-100	90-100	70-85
	7-26	Sandy clay loam, sandy loam	ML, SM	A-2, A-4, A-6, A-7	0	0	95-100	90-100	60-80
	26-47	Sandy clay loam, sandy clay	MH, ML, SM	A-4, A-5, A-7, A-6	0	0	95-100	90-100	65-80
	47-80	Sandy clay loam, sandy loam	ML, SM	A-1, A-2, A-4	0	0	95-100	90-100	45-85
MrB:									
Marvyn----------	0-8	Loamy sand	SM	A-2	0	0	95-100	90-100	50-80
	8-37	Sandy clay loam, sandy loam	SM, ML, SC	A-2, A-4, A-6, A-7	0	0	95-100	90-100	60-80
	37-60	Sandy clay loam, sandy clay	CL, SC	A-4, A-5, A-7	0	0	95-100	90-100	65-80
	60-80	Sandy clay, clay, sandy clay loam	CL, SC, CL-ML	A-4, A-6, A-7	0	0	98-100	95-100	75-95
MwB2:									
Mecklenburg-----	0-4	Gravelly sandy loam	SM	A-4	0	0	85-100	70-100	30-85
	4-25	Clay	CH, MH	A-7	0	0	90-100	85-100	80-100
	25-33	Loam, sandy clay loam, clay loam	CL	A-7, A-4, A-6	0	0	90-100	85-100	80-100
	33-80	Loam, sandy clay loam, clay loam	CL	A-7, A-4, A-6	0	0	90-100	85-100	80-100

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40
	In				Pct	Pct			
MxD2:									
Mecklenburg-----	0-4	Gravelly loam, loam	SM	A-4	0	0	85-100	70-100	30-85
	4-25	Clay	MH, CH	A-7	0	0	90-100	85-100	80-100
	25-33	Loam, sandy clay loam, clay loam	CL	A-7, A-4, A-6	0	0	90-100	85-100	80-100
	33-80	Loam, sandy clay loam, clay loam	CL	A-7, A-4, A-6	0	0	90-100	85-100	80-100
PaC2:									
Pacolet---------	0-4	Gravelly sandy loam	SM	A-2, A-4	0	0	85-100	70-100	30-85
	4-9	Clay loam, sandy clay loam, sandy loam	SC, CL-ML, CL, SC-SM	A-2, A-4, A-6	0	0	80-100	70-100	60-80
	9-36	Sandy clay, clay loam, clay	MH	A-6, A-7	0	0	80-100	80-100	60-95
	36-80	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2-4, A-4	0	0	80-100	70-100	60-80
PrD2:									
Pacolet---------	0-4	Gravelly sandy loam	SM	A-2, A-4	0	0-4	85-100	75-100	30-85
	4-9	Clay loam, sandy clay loam, sandy loam	SC-SM, CL-ML, SC, CL	A-2, A-4, A-6	0	0	80-100	70-100	60-80
	9-36	Sandy clay, clay loam, clay	MH	A-6, A-7	0	0	80-100	80-100	60-95
	36-80	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2-4, A-4	0	0	80-100	70-100	60-80
Rion------------	0-4	Gravelly sandy loam, gravelly loamy sand	MH, ML, SC-SM, SM	A-2, A-4, A-5	0	0	75-95	65-80	60-75
	4-11	Sandy loam, loamy sand	CL-ML, SC-SM, SC, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	11-34	Sandy loam, sandy clay loam, loam	CL-ML, CL, SC, SC-SM	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	34-80	Sandy loam, loamy sand	SM, SC-SM, SC	A-2, A-4, A-6	0	0	90-100	80-100	60-85
PrE2:									
Pacolet---------	0-4	Gravelly sandy loam	SM	A-2, A-4	0	0-16	85-100	70-100	30-85
	4-9	Clay loam, sandy clay loam, sandy loam	SC, SC-SM, CL-ML, CL	A-2, A-4, A-6	0	0	80-100	70-100	60-80
	9-36	Sandy clay, clay loam, clay	MH	A-6, A-7	0	0	80-100	80-100	60-95
	36-80	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2-4, A-4	0	0	80-100	70-100	60-80

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40
	In				Pct	Pct			
Rion------------	0-4	Gravelly sandy loam, gravelly loamy sand	MH, ML, SC-SM, SM	A-2, A-4, A-5	0	0	75-95	65-80	60-75
	4-11	Sandy loam, loamy sand	CL-ML, SC, SC-SM, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	11-34	Sandy loam, sandy clay loam, loam	CL-ML, SC-SM, SC, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-85
	34-80	Sandy loam, loamy sand	SC, SC-SM, SM	A-2, A-4, A-6	0	0	90-100	80-100	60-85
Pt:									
Pits------------	---	---	---	---	---	---	---	---	---
SgD:									
Springhill------	0-8	Sandy loam	SM	A-2, A-4	0	0	98-100	95-100	75-85
	8-17	Sandy loam, fine sandy loam	SM, SC-SM	A-2, A-4	0	0	98-100	95-100	70-96
	17-52	Sandy loam, sandy clay loam	SC-SM, SC, CL	A-4, A-6	0	0	98-100	95-100	70-96
	52-80	Loamy sand, sandy loam	SM, SC-SM	A-2, A-4	0	0	98-100	95-100	70-96
TbD2:									
Tallapoosa------	0-4	Gravelly loam	CL-ML, GM, SM	A-2-4, A-4	0	0	70-85	65-75	45-65
	4-8	Gravelly loam	CL-ML, GM, SM	A-2-4, A-4	0	0	70-85	65-75	45-65
	8-12	Loam, clay loam	ML, CL	A-6, A-7	0	0	80-100	80-100	65-95
	12-16	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	16-80	Weathered bedrock			---	---	---	---	---
Badin-----------	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	85-100	75-95	65-90
	5-20	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	65-100	60-100	55-100
	20-28	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	28-80	Weathered bedrock			---	---	---	---	---
Fruithurst------	0-3	Gravelly loam	CL-ML, ML, SC-SM, SM	A-4	0	0	85-100	70-100	30-85
	3-7	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	7-30	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	30-80	Weathered bedrock			---	---	---	---	---
TfE2:									
Tallapoosa------	0-4	Gravelly loam	CL-ML, GM, SM	A-2-4, A-4	0	0-5	70-85	65-75	45-65
	4-8	Gravelly loam	SM, GM, CL-ML	A-2-4, A-4	0	0	70-85	65-75	45-65
	8-12	Loam, clay loam	CL, ML	A-6, A-7	0	0	80-100	80-100	65-95
	12-16	Loam, clay loam	ML, CL	A-6, A-7	0	0-5	80-100	80-100	65-95
	16-80	Weathered bedrock			---	---	---	---	---

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40
	In				Pct	Pct			
Fruithurst------	0-3	Gravelly loam	SC-SM, ML, CL-ML, SM	A-4	0	0-5	70-85	65-75	45-65
	3-7	Loam, clay loam	ML, CL	A-6, A-7	0	0-5	80-100	80-100	65-95
	7-30	Loam, clay loam	CL, ML	A-6, A-7	0	0-5	80-100	80-100	65-95
	30-80	Weathered bedrock			---	---	---	---	---
ToA:									
Toccoa----------	0-4	Fine sandy loam	ML, SM	A-2, A-4	0	0	95-100	95-100	50-85
	4-36	Sandy loam, loam	ML, SM	A-2, A-4	0	0	95-100	90-100	60-100
	36-43	Fine sandy loam, loam, silt loam, sandy loam	SC-SM, ML	A-4	0	0	95-100	90-100	55-100
	43-80	Sandy loam, loamy sand	SM, ML	A-2, A-4	0	0	95-100	90-100	60-100
Ur:									
Urban land------	---	---	---	---	---	---	---	---	---
WeC2:									
Wedowee---------	0-2	Gravelly sandy loam	SC-SM, SM	A-2-4, A-4	0	0-16	85-100	70-100	30-85
	2-5	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	5-28	Sandy clay, clay loam, clay	SC, ML, MH, CL	A-6, A-7	0	0	95-100	95-100	65-97
	28-34	Loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	90-100	90-100	80-97
	34-80	Sandy clay loam, sandy loam	CL, CL-ML, SC-SM, SC	A-2, A-4, A-6	0	0	80-100	70-100	60-80
WeD2:									
Wedowee---------	0-2	Gravelly sandy loam	SC-SM, SM	A-2-4, A-4	0	0-16	85-100	70-100	30-85
	2-5	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	5-28	Sandy clay, clay loam, clay	CL, MH, ML, SC	A-6, A-7	0	0	95-100	95-100	65-97
	28-34	Loam, sandy clay loam	SC, ML, SM, CL	A-4, A-6	0	0	90-100	90-100	80-97
	34-80	Sandy clay loam, sandy loam	SC, CL, CL-ML, SC-SM	A-2, A-4, A-6	0	0	80-100	70-100	60-80

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40
	In				Pct	Pct			
WfE:									
Wedowee---------	0-2	Very gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0	0-16	85-100	70-100	30-85
	2-5	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	5-28	Sandy clay, clay loam, clay	ML, SC, MH, CL	A-6, A-7	0	0	95-100	95-100	65-97
	28-34	Loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	90-100	90-100	80-97
	34-80	Sandy clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	80-100	70-100	60-80
WgC:									
Wedowee---------	0-2	Gravelly sandy loam	SC-SM, SM	A-2-4, A-4	0	0-25	85-100	70-100	30-85
	2-5	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2, A-4	0	0	84-100	80-100	67-90
	5-28	Sandy clay, clay loam, clay	SC, ML, MH, CL	A-6, A-7	0	0	95-100	95-100	65-97
	28-34	Loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	90-100	90-100	80-97
	34-80	Sandy clay loam, sandy loam	SC, SC-SM, CL, CL-ML	A-2, A-4, A-6	0	0	80-100	70-100	60-80
Saw-------------	0-5	Sandy loam	SC-SM, SM	A-2-4, A-4	0	0	85-100	80-100	65-90
	5-9	Sandy loam	SC-SM, SM	A-2-4, A-4	0	0	85-100	80-100	65-90
	9-23	Clay, sandy clay, clay loam	MH, ML	A-6, A-7	0	0	85-100	80-100	70-95
	23-34	Sandy loam, sandy clay loam, gravelly sandy loam	SC, SM, SC-SM, GM	A-2-4, A-4	0	0	60-100	55-100	40-90
	34-80	Unweathered bedrock			---	---	---	---	---
WhA:									
Wehadkee--------	0-4	Silt loam	CL-ML, ML, CL	A-4, A-6	0	0	95-100	90-100	70-100
	4-20	Loam, silt loam, silty clay loam, sandy clay loam	CL, CL-ML, ML	A-4, A-6	0	0	85-100	80-100	70-95
	20-80	Sandy clay loam, sandy loam, silt loam	SM, SC, CL, ML	A-4	0	0	75-100	70-100	60-90

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--			
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	2
	In				Pct	Pct				
WkA:										
Wickham---------	0-10	Sandy loam	CL-ML, ML, SM, SC-SM	A-4	0	0	95-100	90-100	70-100	45
	10-43	Sandy clay loam, clay loam, loam	CL, SC, SM, CL-ML	A-2, A-4, A-6, A-7-6	0	0	95-100	90-100	75-100	30
	43-80	Sandy clay loam, sandy loam	SM, CL, CL-ML, SC	A-2, A-4, A-6, A-7-6	0	0	95-100	90-100	75-100	30
WkB:										
Wickham---------	0-10	Sandy loam	SM, CL-ML, ML, SC-SM	A-4	0	0	95-100	90-100	70-100	45
	10-43	Sandy clay loam, clay loam, loam	CL-ML, SC, SM, CL	A-6, A-7-6, A-2, A-4	0	0	95-100	90-100	75-100	30
	43-75	Sandy clay loam, sandy loam	SC, SM, CL-ML, CL	A-2, A-4, A-6, A-7-6	0	0	95-100	90-100	75-100	30
	75-80	Loamy sand, sandy loam	SP-SM, SM	A-1, A-2, A-3	0	0	100	95-100	40-99	5
WnD:										
Wynott----------	0-8	Gravelly sandy loam	SM, ML, CL-ML, CL	A-4	0	0-10	80-100	50-75	40-70	35
	8-12	Gravelly sandy loam	SM, ML, CL-ML, CL	A-4	0	0-10	80-100	50-75	40-70	35
	12-32	Clay, clay loam, silty clay	CH, CL	A-7	0	0	85-100	85-100	80-100	65
	32-38	Sandy clay, sandy clay loam, clay loam	SC, CL	A-6	0	0	85-100	85-100	70-95	35
	38-80	Weathered bedrock			---	---	---	---	---	-
Winnsboro-------	0-6	Very gravelly sandy loam	SC-SM, SM	A-2-4	0	0-10	70-80	60-75	25-40	5
	6-12	Gravelly sandy clay loam, gravelly sandy loam	CL, SC	A-4, A-6	0	0	80-100	50-75	40-70	35
	12-40	Clay, clay loam, silty clay	CH, CL	A-7	0	0	85-100	85-100	80-100	65
	40-56	Sandy clay, sandy clay loam, clay loam	SC, CL	A-6	0	0	85-100	85-100	70-95	35
	56-80	Weathered bedrock			---	---	---	---	---	-

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--			
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	2
	In				Pct	Pct				
WyE:										
Wynott----------	0-8	Gravelly sandy loam	ML, CL, SM, CL-ML	A-4	0	0-10	80-100	50-75	40-70	35
	8-12	Gravelly sandy loam	SM, ML, CL-ML, CL	A-4	0	0-10	80-100	50-75	40-70	35
	12-32	Clay, clay loam, silty clay	CL, CH	A-7	0	0	85-100	85-100	80-100	65
	32-38	Sandy clay, sandy clay loam, clay loam	CL, SC	A-6	0	0	85-100	85-100	70-95	35
	38-80	Weathered bedrock			---	---	---	---	---	-
Wilkes----------	0-4	Very gravelly sandy loam	SM, SC-SM	A-1-b, A-2, A-4	0	0	70-80	60-75	45-75	20
	4-9	Gravelly sandy loam	SM, SC-SM	A-1-b, A-2, A-4	0	0	70-80	60-75	45-75	20
	9-15	Clay loam, clay, sandy clay loam	CL, CH	A-6, A-7	0	0-10	80-100	80-100	75-96	50
	15-80	Weathered bedrock			---	---	---	---	---	-

Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "
erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not est

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wi er bi gr
								Kw	Kf	T	
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
AlA:											
Altavista------------	0-7	5-15	1.30-1.50	14.00-42.00	0.12-0.20	0.0-2.9	0.5-3.0	.24	.24	5	
	7-11	10-35	1.30-1.50	4.00-42.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
	11-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
	52-80	10-35	1.30-1.50	4.00-42.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
AtB:											
Altavista------------	0-7	10-24	1.30-1.50	14.00-42.00	0.12-0.20	0.0-2.9	0.5-3.0	.24	.24	5	
	7-11	10-35	1.30-1.50	4.00-42.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
	11-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
	52-80	10-35	1.30-1.50	4.00-42.00	0.12-0.20	0.0-2.9	0.0-0.5	.24	.24		
BdB2:											
Badin-----------------	0-5	10-27	1.20-1.45	4.00-14.00	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	3	
	5-20	35-55	1.30-1.50	0.42-1.40	0.14-0.19	3.0-5.9	0.0-0.5	.24	.28		
	20-28	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	28-80	---	---	0.00-3.00	---	0.0-0.0	0.0-0.0	---	---		
Tatum-----------------	0-5	12-27	1.10-1.40	4.00-14.00	0.10-0.17	0.0-2.9	0.5-2.0	.20	.37	4	
	5-10	12-27	1.10-1.40	4.00-14.00	0.10-0.17	0.0-2.9	0.2-1.0	.20	.37		
	10-42	30-60	1.40-1.60	4.00-14.00	0.10-0.19	3.0-5.9	0.0-0.5	.28	.28		
	42-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
Tallapoosa-----------	0-4	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.5-2.0	.24	.28	2	
	4-8	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.2-1.0	.24	.28		
	8-12	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	12-16	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	16-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
BfC:											
Badin-----------------	0-5	10-27	1.20-1.45	4.00-14.00	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	3	
	5-20	35-55	1.30-1.50	0.42-1.40	0.14-0.19	3.0-5.9	0.0-0.5	.24	.28		
	20-28	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	28-80	---	---	0.00-3.00	---	0.0-0.0	0.0-0.0	---	---		
Tallapoosa-----------	0-4	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.5-2.0	.24	.28	2	
	4-8	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.2-1.0	.24	.28		
	8-12	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	12-16	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	16-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	W e b g
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
Fruithurst-----------	0-3	7-17	1.35-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.28	3	
	3-7	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	7-30	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32		
	30-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
BuA:											
Buncombe-------------	0-9	3-12	1.60-1.75	42.00-141.00	0.03-0.07	0.0-2.9	0.5-1.0	.10	.10	5	
	9-80	3-12	1.60-1.75	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10		
CdB:											
Cecil----------------	0-4	10-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	4-12	20-50	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	12-39	35-60	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	39-64	20-50	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	64-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
Urban land-----------	0-6	---	---	0.00-0.00	0.00-0.00	0.0-0.0	0.0-0.0	---	---	--	
CeB2:											
Cecil----------------	0-4	10-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	4-12	20-40	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	12-39	35-60	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	39-64	20-50	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	64-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
CeC2:											
Cecil----------------	0-4	10-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	4-12	20-50	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	12-39	35-60	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	39-64	20-40	1.30-1.50	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28		
	64-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
CHA:											
Chewacla-------------	0-6	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	1.0-4.0	.32	.32	5	
	6-20	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	0.5-2.0	.32	.32		
	20-27	12-20	1.30-1.60	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.28	.28		
	27-53	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	0.5-2.0	.32	.32		
	53-80	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	0.5-2.0	.32	.32		
Cartecay-------------	0-3	15-24	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-2.0	.24	.24	5	
	3-32	8-18	1.30-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.24	.24		
	32-47	8-18	1.30-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.32	.32		
	47-80	2-16	1.30-1.55	42.00-141.00	0.06-0.09	0.0-2.9	0.5-1.0	.15	.20		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	W e b g
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
Toccoa---------------	0-4	2-15	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.10	.10	4	
	4-36	2-19	1.40-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.20	.20		
	36-43	7-17	1.35-1.45	14.00-42.00	0.09-0.20	0.0-2.9	1.0-2.0	.24	.24		
	43-80	2-19	1.40-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.20	.20		
CoB:											
Cowarts--------------	0-3	3-10	1.30-1.70	14.00-42.00	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	4	
	3-9	12-24	1.30-1.50	4.00-14.00	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28		
	9-37	25-40	1.30-1.50	0.40-1.70	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		
	37-70	18-35	1.65-1.80	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24		
	70-80	25-50	1.30-1.70	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		
CoC:											
Cowarts--------------	0-3	3-10	1.30-1.70	14.00-42.00	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	4	
	3-9	12-24	1.30-1.50	4.00-14.00	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28		
	9-37	25-40	1.30-1.50	0.40-1.70	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		
	37-70	18-35	1.65-1.80	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24		
	70-80	25-50	1.30-1.70	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		
CrD:											
Cowarts--------------	0-3	5-20	1.25-1.55	14.00-42.00	0.06-0.12	0.0-2.9	1.0-3.0	.20	.24	4	
	3-9	12-24	1.30-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.2-1.0	.28	.28		
	9-37	25-40	1.30-1.50	0.40-1.70	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		
	37-70	18-35	1.45-1.70	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.24	.28		
	70-80	25-50	1.30-1.70	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		
CwE:											
Cowarts--------------	0-3	5-20	1.25-1.55	14.00-42.00	0.06-0.12	0.0-2.9	1.0-3.0	.20	.24	4	
	3-9	12-24	1.30-1.50	4.00-14.00	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28		
	9-37	25-40	1.30-1.50	0.40-1.70	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		
	37-70	18-35	1.65-1.80	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24		
	70-80	25-50	1.30-1.70	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		
Uchee----------------	0-6	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.2-3.0	.10	.10	5	
	6-21	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10		
	21-29	8-30	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		
	29-50	25-50	1.40-1.60	1.40-4.00	0.10-0.16	3.0-5.9	0.0-0.5	.28	.28		
	50-64	15-40	1.40-1.60	1.40-14.00	0.10-0.16	3.0-5.9	0.0-0.5	.28	.28		
	64-80	5-15	1.40-1.60	4.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.24	.24		
DAM:											
Dam------------------	---	---	---	---	---	---	---	---	---	--	

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			W e b g
								Kw	Kf	T	
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
EnB:											
Enon----------------	0-4	7-20	1.20-1.40	4.00-14.00	0.14-0.17	0.0-2.9	0.5-2.0	.17	.24	4	
	4-12	15-35	1.30-1.60	1.40-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28		
	12-50	40-60	1.20-1.45	0.42-1.40	0.16-0.22	9.0-25.0	0.0-0.5	.20	.20		
	50-80	15-35	1.30-1.60	0.42-1.40	0.14-0.18	6.0-8.9	0.0-0.5	.28	.28		
Wynott---------------	0-8	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.32	.37	3	
	8-12	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.2-1.0	.32	.37		
	12-32	35-65	1.20-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.28	.28		
	32-38	20-45	1.30-1.50	1.40-4.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28		
	38-80	---	---	0.00-14.00	0.00-0.01	0.0-0.0	0.0-0.0	---	---		
EuA:											
Eunola---------------	0-8	10-20	1.35-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.5-2.0	.20	.20	5	
	8-40	18-35	1.35-1.65	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.28	.28		
	40-80	8-25	1.35-1.65	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		
FaA:											
Fluvaquents----------	0-6	2-18	1.25-1.35	14.00-42.00	0.10-0.15	0.0-2.9	3.0-10	.20	.20	5	
	6-80	10-18	1.35-1.60	0.42-1.40	0.10-0.20	0.0-2.9	0.5-1.0	.37	.37		
GrA:											
Greenville-----------	0-8	5-20	1.30-1.65	4.00-42.00	0.07-0.14	0.0-2.9	0.5-2.0	.24	.24	5	
	8-13	18-35	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		
	13-80	35-55	1.35-1.55	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.17	.17		
GrB:											
Greenville-----------	0-8	5-20	1.30-1.65	4.00-42.00	0.07-0.14	0.0-2.9	0.5-2.0	.24	.24	5	
	8-13	18-35	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		
	13-80	35-55	1.35-1.55	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.17	.17		
GuB:											
Greenville-----------	0-8	5-20	1.30-1.65	4.00-42.00	0.07-0.14	0.0-2.9	0.5-2.0	.24	.24	5	
	8-13	18-35	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.2-1.0	.24	.24		
	13-80	35-55	1.35-1.55	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.17	.17		
Urban land-----------	0-6	---	---	0.00-0.00	0.00-0.00	0.0-0.0	0.0-0.0	---	---	--	
GvD2:											
Gwinnett-------------	0-3	10-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	3-18	28-40	1.30-1.45	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.28	.28		
	18-30	30-46	1.35-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-45	12-24	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
	45-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			W e b g
								Kw	Kf	T	
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
Lloyd----------------	0-4	18-25	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	4-43	35-60	1.30-1.45	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28		
	43-56	20-35	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
	56-80	7-20	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
GwE2:											
Gwinnett-------------	0-3	10-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	4	
	3-18	28-40	1.30-1.45	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.28	.28		
	18-25	35-45	1.35-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	25-45	7-35	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
	45-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
Agricola-------------	0-2	15-25	1.35-1.55	4.00-14.00	0.09-0.14	0.0-2.9	1.0-3.0	.20	.28	3	
	2-6	15-25	1.35-1.55	4.00-14.00	0.09-0.14	0.0-2.9	0.5-1.2	.20	.28		
	6-35	28-40	1.30-1.45	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.28	.28		
	35-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
HdB:											
Hard Labor-----------	0-2	5-10	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	4	
	2-9	5-20	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-1.5	.24	.24		
	9-15	5-20	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.2-1.0	.24	.24		
	15-45	35-60	1.25-1.45	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.28	.28		
	45-80	20-45	1.25-1.45	0.42-1.40	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		
HdC:											
Hard Labor-----------	0-2	5-10	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	4	
	2-9	5-20	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-1.5	.24	.24		
	9-15	5-20	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.2-1.0	.24	.24		
	15-45	35-60	1.25-1.45	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.28	.28		
	45-80	20-45	1.25-1.45	0.42-1.40	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		
HiB2:											
Hiwassee-------------	0-4	10-25	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24	5	
	4-80	7-40	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.2	.28	.28		
KnA:											
Kinston--------------	0-3	5-18	1.40-1.60	14.00-42.00	0.13-0.19	0.0-2.9	2.0-5.0	.24	.24	5	
	3-7	5-18	1.40-1.60	14.00-42.00	0.13-0.19	0.0-2.9	1.0-3.0	.24	.24		
	7-20	5-18	1.40-1.60	14.00-42.00	0.13-0.19	0.0-2.9	1.0-2.0	.24	.24		
	20-40	18-35	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.2-3.0	.32	.32		
	40-80	5-15	1.40-1.60	4.00-14.00	0.10-0.20	0.0-2.9	0.2-1.0	.20	.20		
Iuka-----------------	0-10	6-15	1.40-1.60	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	
	10-42	8-18	1.40-1.60	4.00-14.00	0.10-0.20	0.0-2.9	0.2-1.0	.28	.28		
	42-80	1-10	1.40-1.60	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.10	.10		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	W e b g
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
LdB2:											
Lloyd----------------	0-4	18-25	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.5-1.0	.24	.24	5	
	4-43	35-60	1.30-1.45	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28		
	43-56	25-35	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
	56-80	7-35	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
LnB:											
Lloyd----------------	0-4	18-25	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.5-1.0	.24	.24	5	
	4-43	35-60	1.30-1.45	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28		
	43-56	20-35	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
	56-80	7-20	1.45-1.65	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		
Urban land-----------	0-6	---	---	0.00-0.00	0.00-0.00	0.0-0.0	0.0-0.0	---	---	--	
LoF:											
Louisa---------------	0-3	10-35	1.35-1.55	14.00-42.00	0.10-0.15	0.0-2.9	0.5-1.5	.24	.28	2	
	3-17	10-35	1.35-1.55	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.28		
	17-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
Mountain Park--------	0-4	8-19	1.50-1.60	4.00-14.00	0.08-0.12	0.0-2.9	0.5-2.0	.24	.24	3	
	4-10	8-19	1.50-1.60	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.24	.24		
	10-23	20-36	1.40-1.55	4.00-14.00	0.12-0.14	0.0-2.9	0.0-0.5	.32	.32		
	23-32	15-25	1.45-1.60	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.32	.32		
	32-46	---	1.50-1.70	4.00-14.00	0.05-0.12	0.0-2.9	0.0-0.5	.24	.24		
	46-55	8-16	1.50-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.0-0.5	.32	.32		
	55-80	---	1.50-1.70	0.01-0.42	---	0.0-0.0	0.0-0.5	---	---		
LrD:											
Louisburg------------	0-8	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	5	
	8-15	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	0.5-2.0	.17	.24		
	15-35	7-20	1.40-1.60	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		
	35-80	7-18	1.40-1.60	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		
Rion-----------------	0-4	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	4	
	4-11	5-18	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	11-34	18-28	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	34-80	2-20	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.20	.24		
Rock outcrop---------	---	---	---	---	---	---	---	---	---	--	
LrE:											
Louisburg------------	0-8	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	5	
	8-15	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	0.5-2.0	.17	.24		
	15-35	7-20	1.40-1.60	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		
	35-80	7-18	1.40-1.60	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			W e b g
								Kw	Kf	T	
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
Rion----------------	0-4	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	4	
	4-11	5-18	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	11-34	18-28	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	34-80	2-20	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.20	.24		
Rock outcrop---------	---	---	---	---	---	---	---	---	---	--	
MaB2:											
Madison--------------	0-4	5-20	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.5-2.0	.24	.24	4	
	4-10	25-35	1.30-1.40	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.32		
	10-28	30-50	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.5	.32	.32		
	28-80	5-20	1.30-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.2	.37	.32		
MaD2:											
Madison--------------	0-4	5-20	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.5-2.0	.24	.24	4	
	4-10	25-35	1.30-1.40	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.32		
	10-28	30-50	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.5	.32	.32		
	28-80	5-20	1.30-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.2	.37	.32		
MdE2:											
Madison--------------	0-4	5-15	1.45-1.65	42.00-141.00	0.08-0.13	0.0-2.9	0.5-2.0	.24	.24	4	
	4-10	25-35	1.30-1.40	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.32		
	10-28	30-50	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.5	.32	.32		
	28-80	5-20	1.30-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.2	.37	.32		
Louisa---------------	0-3	10-35	1.35-1.55	14.00-42.00	0.10-0.15	0.0-2.9	0.5-1.5	.24	.28	2	
	3-17	10-35	1.35-1.55	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.28		
	17-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---		
MnA:											
Marvyn---------------	0-7	5-15	1.30-1.60	14.00-42.00	0.10-0.14	0.0-2.9	0.5-2.0	.24	.24	5	
	7-26	18-35	1.30-1.60	4.00-14.00	0.12-0.17	0.0-2.9	0.0-1.0	.32	.32		
	26-47	25-45	1.40-1.60	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32		
	47-80	10-30	1.40-1.60	1.40-14.00	0.07-0.14	0.0-2.9	0.0-0.0	.32	.32		
MrB:											
Marvyn---------------	0-8	2-12	1.35-1.70	14.00-42.00	0.06-0.11	0.0-2.9	0.5-2.0	.15	.15	5	
	8-37	18-35	1.30-1.60	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.32	.32		
	37-60	25-45	1.40-1.60	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32		
	60-80	25-50	1.30-1.70	4.00-14.00	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	W e b g
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
MwB2:											
Mecklenburg----------	0-4	10-18	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-1.5	.24	.24	4	
	4-25	40-60	1.40-1.60	0.42-1.40	0.12-0.14	3.0-5.9	0.0-0.5	.28	.28		
	25-33	20-35	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32		
	33-80	20-35	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32		
MxD2:											
Mecklenburg----------	0-4	18-25	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-1.5	.24	.24	4	
	4-25	30-50	1.40-1.60	0.42-1.40	0.12-0.14	3.0-5.9	0.0-0.5	.28	.28		
	25-33	20-35	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32		
	33-80	20-35	1.40-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32		
PaC2:											
Pacolet--------------	0-4	8-20	1.00-1.50	14.00-42.00	0.06-0.10	0.0-2.9	1.0-3.0	.20	.24	3	
	4-9	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
	9-36	35-60	1.30-1.50	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.32		
	36-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
PrD2:											
Pacolet--------------	0-4	8-20	1.00-1.50	14.00-42.00	0.06-0.10	0.0-2.9	1.0-3.0	.20	.24	4	
	4-9	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
	9-36	35-65	1.30-1.50	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.32		
	36-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
Rion-----------------	0-4	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	4	
	4-11	5-18	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	11-34	18-28	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	34-80	2-20	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.20	.24		
PrE2:											
Pacolet--------------	0-4	8-20	1.00-1.50	14.00-42.00	0.06-0.10	0.0-2.9	1.0-3.0	.20	.24	4	
	4-9	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
	9-36	35-65	1.30-1.50	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.32		
	36-80	10-25	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.37		
Rion-----------------	0-4	5-18	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	1.0-3.0	.17	.20	4	
	4-11	5-18	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	11-34	18-28	1.40-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		
	34-80	2-20	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.20	.24		
Pt:											
Pits-----------------	---	---	---	---	---	---	---	---	---	--	

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T
	In	Pct	g/cc	um/sec	In/in	Pct	Pct			
SgD:										
Springhill-----------	0-8	7-15	1.30-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	5
	8-17	7-18	1.30-1.50	14.00-42.00	0.07-0.12	0.0-2.9	0.2-1.0	.20	.20	
	17-52	18-35	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24	
	52-80	5-25	1.40-1.65	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20	
TbD2:										
Tallapoosa-----------	0-4	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.5-2.0	.24	.28	2
	4-8	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.2-1.0	.24	.28	
	8-12	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	12-16	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	16-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---	
Badin----------------	0-5	10-27	1.20-1.45	4.00-14.00	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	3
	5-20	35-55	1.30-1.50	0.42-1.40	0.14-0.19	3.0-5.9	0.0-0.5	.24	.28	
	20-28	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	28-80	---	---	0.00-3.00	---	0.0-0.0	0.0-0.0	---	---	
Fruithurst-----------	0-3	7-17	1.35-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.28	3
	3-7	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	7-30	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	30-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---	
TfE2:										
Tallapoosa-----------	0-4	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.5-2.0	.24	.28	2
	4-8	7-25	1.30-1.60	4.00-14.00	0.11-0.20	0.0-2.9	0.2-1.0	.24	.28	
	8-12	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	12-16	18-34	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	16-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---	
Fruithurst-----------	0-3	7-17	1.35-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.28	3
	3-7	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	7-30	18-35	1.30-1.45	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32	
	30-80	---	---	0.01-0.42	---	0.0-0.0	0.0-0.0	---	---	
ToA:										
Toccoa---------------	0-4	2-15	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.10	.10	4
	4-36	2-19	1.40-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.20	.20	
	36-43	7-17	1.35-1.45	14.00-42.00	0.09-0.20	0.0-2.9	1.0-2.0	.24	.24	
	43-80	2-19	1.40-1.50	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.20	.20	
Ur:										
Urban land-----------	---	---	---	---	---	---	---	---	---	--

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	W e b g
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
WeC2:											
Wedowee--------------	0-2	5-20	1.25-1.60	14.00-42.00	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24	3	
	2-5	5-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24		
	5-28	35-50	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	28-34	14-30	1.30-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	34-80	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.28		
WeD2:											
Wedowee--------------	0-2	5-20	1.25-1.60	14.00-42.00	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24	4	
	2-5	5-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24		
	5-28	35-50	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	28-34	14-30	1.30-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	34-80	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.28		
WfE:											
Wedowee--------------	0-2	5-20	1.25-1.60	14.00-42.00	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24	4	
	2-5	5-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24		
	5-28	35-50	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	28-34	14-30	1.30-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	34-80	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.28		
WgC:											
Wedowee--------------	0-2	5-20	1.25-1.60	14.00-42.00	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24	4	
	2-5	5-20	1.30-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24		
	5-28	35-50	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	28-34	14-30	1.30-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	34-80	15-30	1.20-1.50	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.28		
Saw------------------	0-5	5-20	1.30-1.50	14.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.20	.20	2	
	5-9	5-20	1.30-1.50	14.00-42.00	0.08-0.12	0.0-2.9	0.2-1.0	.20	.20		
	9-23	35-60	1.30-1.50	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28		
	23-34	5-30	1.30-1.50	4.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.28		
	34-80	---	---	0.00-0.07	0.00-0.01	0.0-0.0	0.0-0.0	---	---		
WhA:											
Wehadkee-------------	0-4	10-20	1.20-1.40	4.23-14.11	0.16-0.22	0.0-2.9	2.0-4.0	.37	.37	5	
	4-20	15-35	1.20-1.40	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.20	.20		
	20-80	10-35	1.20-1.50	4.23-14.11	0.10-0.14	0.0-2.9	0.0-0.5	.20	.20		
WkA:											
Wickham--------------	0-10	8-16	1.45-1.65	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.24	.24	5	
	10-43	18-30	1.30-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.24	.24		
	43-80	10-20	1.30-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.24	.24		

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			W e b g
								Kw	Kf	T	
	In	Pct	g/cc	um/sec	In/in	Pct	Pct				
WkB:											
Wickham--------------	0-10	8-18	1.45-1.65	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.24	.24	5	
	10-43	18-30	1.30-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.24	.24		
	43-75	10-35	1.30-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.2-1.0	.24	.24		
	75-80	8-18	1.50-1.70	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.0	.10	.10		
WnD:											
Wynott---------------	0-8	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.32	.37	3	
	8-12	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.2-1.0	.32	.37		
	12-32	35-65	1.20-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.28	.28		
	32-38	20-45	1.30-1.50	1.40-4.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28		
	38-80	---	---	0.00-14.00	0.00-0.01	0.0-0.0	0.0-0.0	---	---		
Winnsboro------------	0-6	5-20	1.30-1.50	14.00-42.00	0.11-0.15	0.0-2.9	0.5-2.0	.17	.24	4	
	6-12	12-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.2-1.0	.32	.37		
	12-40	35-65	1.20-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.28	.28		
	40-56	20-45	1.30-1.50	1.40-4.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28		
	56-80	---	---	0.00-2.00	---	0.0-0.0	0.0-0.0	---	---		
WyE:											
Wynott---------------	0-8	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.32	.37	3	
	8-12	7-27	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.2-1.0	.32	.37		
	12-32	35-65	1.20-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.28	.28		
	32-38	20-45	1.30-1.50	1.40-4.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28		
	38-80	---	---	0.00-14.00	0.00-0.01	0.0-0.0	0.0-0.0	---	---		
Wilkes---------------	0-4	5-20	1.30-1.50	14.00-42.00	0.10-0.14	0.0-2.9	0.5-2.0	.17	.24	2	
	4-9	5-20	1.30-1.50	14.00-42.00	0.10-0.14	0.0-2.9	0.2-1.0	.17	.24		
	9-15	34-60	1.40-1.60	1.40-4.00	0.15-0.20	3.0-5.9	0.0-0.5	.32	.32		
	15-80	---	---	0.00-3.00	---	0.0-0.0	0.0-0.0	---	---		

Chemical Soil Properties

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
AlA:				
Altavista------------	0-7	---	3.0-8.0	4.5-6.0
	7-11	---	3.0-8.0	4.5-6.0
	11-52	---	3.0-7.0	4.5-6.0
	52-80	---	3.0-8.0	4.5-6.0
AtB:				
Altavista------------	0-7	---	3.0-8.0	4.5-6.0
	7-11	---	3.0-8.0	4.5-6.0
	11-52	---	3.0-7.0	4.5-6.0
	52-80	---	3.0-8.0	4.5-6.0
BdB2:				
Badin----------------	0-5	---	3.0-8.0	4.5-5.5
	5-20	---	7.0-12	4.5-5.5
	20-28	---	3.5-8.2	4.5-5.5
	28-80	---	---	---
Tatum----------------	0-5	---	2.1-5.3	4.5-5.5
	5-10	---	2.2-5.5	4.5-5.5
	10-42	---	5.9-15	4.5-5.5
	42-80	---	---	---
Tallapoosa-----------	0-4	---	1.2-4.9	4.5-6.0
	4-8	---	1.2-5.1	4.5-6.0
	8-12	---	3.5-8.2	4.5-6.0
	12-16	---	3.5-8.2	4.5-6.0
	16-80	---	---	---
BfC:				
Badin----------------	0-5	---	3.0-8.0	4.5-5.5
	5-20	---	7.0-12	4.5-5.5
	20-28	---	3.5-8.2	4.5-5.5
	28-80	---	---	---
Tallapoosa-----------	0-4	---	1.2-4.9	4.5-6.0
	4-8	---	1.2-5.1	4.5-6.0
	8-12	---	3.5-8.2	4.5-6.0
	12-16	---	3.5-8.2	4.5-6.0
	16-80	---	---	---
Fruithurst-----------	0-3	---	1.2-3.3	4.5-5.5
	3-7	---	3.5-8.4	4.5-5.5
	7-30	---	3.5-8.4	4.5-5.5
	30-80	---	---	---
BuA:				
Buncombe-------------	0-9	2.6-9.1	---	4.5-6.5
	9-80	2.0-8.6	---	4.5-6.5
CdB:				
Cecil----------------	0-4	1.0-5.0	---	4.5-6.0
	4-12	---	5.0-10	4.5-5.5
	12-39	---	3.0-12	4.5-5.5
	39-64	---	5.0-10	4.5-5.5
	64-80	---	4.0-10	4.5-5.5
Urban land-----------	0-6	---	---	---

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
CeB2:				
Cecil----------------	0-4	1.0-5.0	---	4.5-6.0
	4-12	---	5.0-10	4.5-5.5
	12-39	---	3.0-12	4.5-5.5
	39-64	---	5.0-10	4.5-5.5
	64-80	---	4.0-10	4.5-5.5
CeC2:				
Cecil----------------	0-4	1.0-5.0	---	4.5-6.0
	4-12	---	5.0-10	4.5-5.5
	12-39	---	3.0-12	4.5-5.5
	39-64	---	5.0-10	4.5-5.5
	64-80	---	4.0-10	4.5-5.5
CHA:				
Chewacla-------------	0-6	9.7-19	---	4.5-6.5
	6-20	9.6-19	---	4.5-6.5
	20-27	6.5-11	---	4.5-6.5
	27-53	9.6-19	---	4.5-6.5
	53-80	9.6-19	---	4.5-6.5
Cartecay-------------	0-3	6.0-10	---	4.5-6.5
	3-32	6.0-14	---	4.5-6.5
	32-47	3.9-8.6	2.9-6.4	4.5-6.5
	47-80	6.0-12	---	4.5-6.5
Toccoa---------------	0-4	2.0-5.0	---	4.5-6.0
	4-36	1.0-4.0	---	4.5-6.0
	36-43	4.7-13	3.5-9.5	4.5-6.0
	43-80	1.0-4.0	---	4.5-6.0
CoB:				
Cowarts--------------	0-3	---	1.0-5.0	4.5-5.5
	3-9	---	2.0-10	4.5-5.5
	9-37	---	2.0-10	4.5-5.5
	37-70	---	2.0-8.0	4.5-5.5
	70-80	---	4.5-5.5	4.5-5.5
CoC:				
Cowarts--------------	0-3	---	1.0-5.0	4.5-5.5
	3-9	---	2.0-10	4.5-5.5
	9-37	---	2.0-10	4.5-5.5
	37-70	---	2.0-8.0	4.5-5.5
	70-80	---	4.5-5.5	4.5-5.5
CrD:				
Cowarts--------------	0-3	---	2.0-8.0	4.5-5.5
	3-9	---	2.0-10	4.5-5.5
	9-37	---	2.0-10	4.5-5.5
	37-70	---	2.0-8.0	4.5-5.5
	70-80	---	4.5-5.5	4.5-5.5
CwE:				
Cowarts--------------	0-3	---	2.0-8.0	4.5-5.5
	3-9	---	2.0-10	4.5-5.5
	9-37	---	2.0-10	4.5-5.5
	37-70	---	2.0-8.0	4.5-5.5
	70-80	---	4.5-5.5	4.5-5.5

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
Uchee	0-6	---	1.0-5.0	4.5-5.5
	6-21	---	1.0-5.0	4.5-5.5
	21-29	---	1.0-10	4.5-5.5
	29-50	---	3.0-10	4.5-5.5
	50-64	---	3.0-10	4.5-5.5
	64-80	---	3.0-10	4.5-5.5
DAM:				
Dam	---	---	---	---
EnB:				
Enon	0-4	9.0-15	---	5.1-7.3
	4-12	10-22	5.5-14	5.1-7.3
	12-50	26-30	---	5.1-7.3
	50-80	15-30	---	5.1-7.3
Wynott	0-8	---	15-45	4.5-6.5
	8-12	---	15-45	4.5-6.5
	12-32	12-24	9.2-18	4.5-6.5
	32-38	7.0-17	5.2-13	4.5-6.5
	38-80	---	---	---
EuA:				
Eunola	0-8	---	2.0-10	4.5-6.5
	8-40	---	2.0-12	4.5-6.5
	40-80	---	1.0-6.0	4.5-6.5
FaA:				
Fluvaquents	0-6	---	1.6-15	3.6-5.5
	6-80	---	2.9-6.1	3.6-5.5
GrA:				
Greenville	0-8	---	4.0-10	4.5-6.0
	8-13	---	1.5-6.0	4.5-5.5
	13-80	---	4.0-12	4.5-5.5
GrB:				
Greenville	0-8	---	4.0-10	4.5-6.0
	8-13	---	1.5-6.0	4.5-5.5
	13-80	---	4.0-12	4.5-5.5
GuB:				
Greenville	0-8	---	4.0-10	4.5-6.0
	8-13	---	1.5-6.0	4.5-5.5
	13-80	---	4.0-12	4.5-5.5
Urban land	0-6	---	---	---
GvD2:				
Gwinnett	0-3	1.0-5.0	---	4.5-6.5
	3-18	4.0-8.0	---	4.5-6.5
	18-30	3.0-6.0	---	4.5-6.5
	30-45	2.0-10	---	4.5-6.5
	45-80	---	---	5.0-6.0
Lloyd	0-4	4.0-14	---	5.1-6.0
	4-43	4.0-15	---	5.1-6.0
	43-56	2.0-10	---	5.1-6.0
	56-80	2.0-10	---	5.1-6.0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
GwE2:				
Gwinnett-------------	0-3	1.0-5.0	---	4.5-6.5
	3-18	4.0-8.0	---	4.5-6.5
	18-25	3.0-6.0	---	4.5-6.5
	25-45	2.0-10	---	4.5-6.5
	45-80	---	---	---
Agricola-------------	0-2	3.0-5.0	---	4.5-6.5
	2-6	3.0-5.0	---	4.5-6.5
	6-35	4.0-8.0	---	4.5-6.5
	35-80	---	---	---
HdB:				
Hard Labor-----------	0-2	---	1.0-5.0	4.5-6.0
	2-9	---	1.0-5.0	4.5-6.0
	9-15	---	1.0-5.0	4.5-6.0
	15-45	---	3.0-12	4.5-6.0
	45-80	---	2.0-8.0	4.5-6.0
HdC:				
Hard Labor-----------	0-2	---	1.0-5.0	4.5-6.0
	2-9	---	1.0-5.0	4.5-6.0
	9-15	---	1.0-5.0	4.5-6.0
	15-45	---	3.0-12	4.5-6.0
	45-80	---	2.0-8.0	4.5-6.0
HiB2:				
Hiwassee-------------	0-4	1.0-5.0	---	5.1-6.0
	4-80	2.0-6.0	---	5.1-6.0
KnA:				
Kinston--------------	0-3	---	3.0-9.0	4.5-5.5
	3-7	---	3.0-9.0	4.5-5.5
	7-20	---	3.0-9.0	4.5-5.5
	20-40	---	3.0-10	4.5-5.5
	40-80	---	0.9-3.0	4.5-5.5
Iuka-----------------	0-10	---	1.4-4.6	4.5-5.5
	10-42	---	2.1-6.2	4.5-5.5
	42-80	---	0.2-4.3	4.5-5.5
LdB2:				
Lloyd----------------	0-4	4.0-14	---	5.1-6.0
	4-43	4.0-15	---	5.1-6.0
	43-56	2.0-10	---	5.1-6.0
	56-80	2.0-10	---	5.1-6.0
LnB:				
Lloyd----------------	0-4	4.0-14	---	5.1-6.0
	4-43	4.0-15	---	5.1-6.0
	43-56	2.0-10	---	5.1-6.0
	56-80	2.0-10	---	5.1-6.0
Urban land-----------	0-6	---	---	---
LoF:				
Louisa---------------	0-3	2.5-9.9	1.9-7.4	4.5-6.0
	3-17	2.5-9.9	1.9-7.4	4.5-6.0
	17-80	---	---	---

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
Mountain Park--------	0-4	3.1-9.2	2.3-6.9	4.5-5.5
	4-10	2.0-5.9	1.5-4.4	4.5-5.5
	10-23	5.0-10	3.8-7.6	4.5-5.5
	23-32	3.8-7.4	2.8-5.5	4.5-5.5
	32-46	---	---	---
	46-55	2.0-5.1	1.5-3.8	4.5-5.7
	55-80	---	---	---
LrD:				
Louisburg------------	0-8	---	2.0-12	4.5-6.0
	8-15	---	2.0-12	4.5-6.0
	15-35	---	2.0-6.0	4.5-6.0
	35-80	---	2.0-6.0	4.5-6.0
Rion-----------------	0-4	---	2.0-12	4.5-6.0
	4-11	4.0-10	---	4.5-6.0
	11-34	4.0-10	---	4.5-6.0
	34-80	2.0-8.0	---	4.5-6.0
Rock outcrop---------	---	---	---	---
LrE:				
Louisburg------------	0-8	---	2.0-12	4.5-6.0
	8-15	---	2.0-12	4.5-6.0
	15-35	---	2.0-6.0	4.5-6.0
	35-80	---	2.0-6.0	4.5-6.0
Rion-----------------	0-4	---	2.0-12	4.5-6.0
	4-11	4.0-10	---	4.5-6.0
	11-34	4.0-10	---	4.5-6.0
	34-80	2.0-8.0	---	4.5-6.0
Rock outcrop---------	---	---	---	---
MaB2:				
Madison--------------	0-4	3.0-10	---	4.5-5.5
	4-10	---	2.0-8.0	4.5-5.5
	10-28	---	3.0-12	4.5-5.5
	28-80	---	1.0-5.0	4.5-5.5
MaD2:				
Madison--------------	0-4	3.0-10	---	4.5-5.5
	4-10	---	2.0-8.0	4.5-5.5
	10-28	---	3.0-12	4.5-5.5
	28-80	---	1.0-5.0	4.5-5.5
MdE2:				
Madison--------------	0-4	3.0-10	---	4.5-5.5
	4-10	---	2.0-8.0	4.5-5.5
	10-28	---	3.0-6.0	4.5-5.5
	28-80	---	1.0-5.0	4.5-5.5
Louisa---------------	0-3	2.5-9.9	1.9-7.4	4.5-6.0
	3-17	2.5-9.9	1.9-7.4	4.5-6.0
	17-80	---	---	---
MnA:				
Marvyn---------------	0-7	---	1.0-5.0	4.5-6.0
	7-26	---	1.5-6.0	4.5-6.0
	26-47	---	1.5-6.0	4.5-6.0
	47-80	---	1.0-5.0	4.5-6.0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
MrB:				
Marvyn	0-8	---	0.5-5.0	4.5-6.0
	8-37	---	1.5-6.0	4.5-6.0
	37-60	---	1.5-6.0	4.5-6.0
	60-80	---	4.5-5.5	4.5-6.0
MwB2:				
Mecklenburg	0-4	5.4-9.7	---	5.1-6.5
	4-25	20-31	---	5.6-7.3
	25-33	10-18	---	5.6-7.3
	33-80	10-18	---	5.6-7.3
MxD2:				
Mecklenburg	0-4	9.6-13	---	5.1-6.5
	4-25	15-26	---	5.6-7.3
	25-33	10-18	---	5.6-7.3
	33-80	10-18	---	5.6-7.3
PaC2:				
Pacolet	0-4	4.0-7.0	---	4.5-6.0
	4-9	---	5.0-12	4.5-6.0
	9-36	---	6.0-18	4.5-6.0
	36-80	---	4.0-10	4.5-6.0
PrD2:				
Pacolet	0-4	4.0-7.0	---	4.5-6.0
	4-9	---	5.0-12	4.5-6.0
	9-36	---	6.0-18	4.5-6.0
	36-80	---	4.0-10	4.5-6.0
Rion	0-4	---	2.0-12	4.5-6.0
	4-11	4.0-10	---	4.5-6.0
	11-34	4.0-10	---	4.5-6.0
	34-80	2.0-8.0	---	4.5-6.0
PrE2:				
Pacolet	0-4	4.0-7.0	---	4.5-6.0
	4-9	---	5.0-12	4.5-6.0
	9-36	---	6.0-18	4.5-6.0
	36-80	---	4.0-10	4.5-6.0
Rion	0-4	---	2.0-12	4.5-6.0
	4-11	4.0-10	---	4.5-6.0
	11-34	4.0-10	---	4.5-6.0
	34-80	2.0-8.0	---	4.5-6.0
Pt:				
Pits	---	---	---	---
SgD:				
Springhill	0-8	---	1.5-6.0	4.5-5.5
	8-17	---	1.5-6.0	4.5-5.5
	17-52	---	1.5-6.0	4.5-5.5
	52-80	---	0.5-5.0	4.5-5.5

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
TbD2:				
Tallapoosa-----------	0-4	---	1.2-4.9	4.5-6.0
	4-8	---	1.2-5.1	4.5-6.0
	8-12	---	3.5-8.2	4.5-6.0
	12-16	---	3.5-8.2	4.5-6.0
	16-80	---	---	---
Badin----------------	0-5	---	3.0-8.0	4.5-5.5
	5-20	---	7.0-12	4.5-5.5
	20-28	---	3.5-8.2	4.5-5.5
	28-80	---	---	---
Fruithurst-----------	0-3	---	1.2-3.3	4.5-5.5
	3-7	---	3.5-8.4	4.5-5.5
	7-30	---	3.5-8.4	4.5-5.5
	30-80	---	---	---
TfE2:				
Tallapoosa-----------	0-4	---	1.2-4.9	4.5-6.0
	4-8	---	1.2-5.1	4.5-6.0
	8-12	---	3.5-8.2	4.5-6.0
	12-16	---	3.5-8.2	4.5-6.0
	16-80	---	---	---
Fruithurst-----------	0-3	---	1.2-3.3	4.5-5.5
	3-7	---	3.5-8.4	4.5-5.5
	7-30	---	3.5-8.4	4.5-5.5
	30-80	---	---	---
ToA:				
Toccoa---------------	0-4	2.0-5.0	---	4.5-6.0
	4-36	1.0-4.0	---	4.5-6.0
	36-43	4.7-13	3.5-9.5	4.5-6.0
	43-80	1.0-4.0	---	4.5-6.0
Ur:				
Urban land-----------	---	---	---	---
WeC2:				
Wedowee--------------	0-2	---	2.0-8.0	4.5-6.0
	2-5	1.0-5.0	---	4.5-6.0
	5-28	---	3.0-10	4.5-6.0
	28-34	---	3.0-10	4.5-6.0
	34-80	---	3.0-8.0	4.5-6.0
WeD2:				
Wedowee--------------	0-2	---	2.0-8.0	4.5-6.0
	2-5	1.0-5.0	---	4.5-6.0
	5-28	---	3.0-10	4.5-6.0
	28-34	---	3.0-10	4.5-6.0
	34-80	---	3.0-8.0	4.5-6.0
WfE:				
Wedowee--------------	0-2	---	2.0-8.0	4.5-6.0
	2-5	1.0-5.0	---	4.5-6.0
	5-28	---	3.0-10	4.5-6.0
	28-34	---	3.0-10	4.5-6.0
	34-80	---	3.0-8.0	4.5-6.0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
WgC:				
Wedowee	0-2	---	2.0-8.0	4.5-6.0
	2-5	1.0-5.0	---	4.5-6.0
	5-28	---	3.0-10	4.5-6.0
	28-34	---	3.0-10	4.5-6.0
	34-80	---	3.0-8.0	4.5-6.0
Saw	0-5	3.0-6.0	1.8-7.1	4.5-6.5
	5-9	3.0-6.0	1.8-7.1	4.5-6.5
	9-23	3.0-9.0	6.6-13	4.5-6.5
	23-34	0.9-5.5	2.0-6.0	4.5-6.5
	34-80	---	---	---
WhA:				
Wehadkee	0-4	15-25	---	4.5-6.5
	4-20	15-25	---	4.5-6.5
	20-80	15-25	---	4.5-6.5
WkA:				
Wickham	0-10	---	1.4-3.1	4.5-5.5
	10-43	---	3.3-6.1	4.5-5.5
	43-80	---	1.8-4.0	4.5-5.5
WkB:				
Wickham	0-10	---	1.4-3.5	4.5-5.5
	10-43	---	3.3-6.1	4.5-5.5
	43-75	---	1.8-7.2	4.5-5.5
	75-80	0.7-2.0	0.4-1.2	4.5-5.5
WnD:				
Wynott	0-8	---	15-45	4.5-6.5
	8-12	---	15-45	4.5-6.5
	12-32	12-24	9.2-18	4.5-6.5
	32-38	7.0-17	5.2-13	4.5-6.5
	38-80	---	---	---
Winnsboro	0-6	2.7-11	---	5.1-7.3
	6-12	6.3-14	15-45	5.1-7.3
	12-40	12-24	9.2-18	5.1-7.3
	40-56	7.0-17	5.2-13	5.1-7.3
	56-80	---	---	---
WyE:				
Wynott	0-8	---	15-45	4.5-6.5
	8-12	---	15-45	4.5-6.5
	12-32	12-24	9.2-18	4.5-6.5
	32-38	7.0-17	5.2-13	4.5-6.5
	38-80	---	---	---
Wilkes	0-4	2.0-10	1.1-6.4	5.1-7.8
	4-9	2.0-10	---	5.1-7.8
	9-15	5.0-11	---	6.1-7.8
	15-80	---	---	---

Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency o flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the f a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
AlA:									
Altavista-----------------	C	Very low							
			January	1.5-2.5	>6.0	---	---	None	Very br
			February	1.5-2.5	>6.0	---	---	None	Very br
			March	1.5-2.5	>6.0	---	---	None	Very br
			April	1.5-2.5	>6.0	---	---	None	Very br
			May	---	---	---	---	None	Very br
			June	---	---	---	---	None	Very br
			July	---	---	---	---	None	Very br
			August	---	---	---	---	None	Very br
			September	---	---	---	---	None	Very br
			October	---	---	---	---	None	Very br
			November	---	---	---	---	None	Very br
			December	1.5-2.5	>6.0	---	---	None	Very br
AtB:									
Altavista-----------------	C	Very low							
			January	1.5-2.5	>6.0	---	---	None	Very br
			February	1.5-2.5	>6.0	---	---	None	Very br
			March	1.5-2.5	>6.0	---	---	None	Very br
			April	1.5-2.5	>6.0	---	---	None	Very br
			May	---	---	---	---	None	Very br
			June	---	---	---	---	None	Very br
			July	---	---	---	---	None	Very br
			August	---	---	---	---	None	Very br
			September	---	---	---	---	None	Very br
			October	---	---	---	---	None	Very br
			November	---	---	---	---	None	Very br
			December	1.5-2.5	>6.0	---	---	None	Very br

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
BdB2:									
Badin	C	Low							
			Jan.-Dec.	---	---	---	---	None	---
Tatum	B	Low							
			Jan.-Dec.	---	---	---	---	None	---
Tallapoosa	C	Low							
			Jan.-Dec.	---	---	---	---	None	---
BfC:									
Badin	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Tallapoosa	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Fruithurst	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
BuA:									
Buncombe	A	Negligible							
			January	---	---	---	---	None	---
			February	---	---	---	---	None	Very br
			March	---	---	---	---	None	Very br
			April	---	---	---	---	None	Very br
			May	---	---	---	---	None	Very br
			June	---	---	---	---	None	Very br
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	---	---	---	---	None	---
			December	---	---	---	---	None	---
CdB:									
Cecil	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Urban land	---	Medium							
			Jan.-Dec.	---	---	---	---	None	---
CeB2:									
Cecil	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
CeC2:									
Cecil	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
CHA:									
Chewacla	C	Negligible							
			January	0.5-1.5	>6.0	---	---	None	Brief
			February	0.5-1.5	>6.0	---	---	None	Brief
			March	0.5-1.5	>6.0	---	---	None	Brief
			April	0.5-1.5	>6.0	---	---	None	Brief
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	0.5-1.5	>6.0	---	---	None	Brief
			December	0.5-1.5	>6.0	---	---	None	Brief
Cartecay	C	Negligible							
			January	0.5-1.5	>6.0	---	---	None	Brief
			February	0.5-1.5	>6.0	---	---	None	Brief
			March	0.5-1.5	>6.0	---	---	None	Brief
			April	0.5-1.5	>6.0	---	---	None	Brief
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	---	---	---	---	None	Brief
			December	0.5-1.5	>6.0	---	---	None	Brief

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
Toccoa	B	Negligible							
			January	2.5-5.0	>6.0	---	---	None	Brief
			February	2.5-5.0	>6.0	---	---	None	Brief
			March	2.5-5.0	>6.0	---	---	None	Brief
			April	2.5-5.0	>6.0	---	---	None	Brief
			May	---	---	---	---	None	Brief
			June	---	---	---	---	None	Brief
			July	---	---	---	---	None	Brief
			August	---	---	---	---	None	Brief
			September	---	---	---	---	None	Brief
			October	---	---	---	---	None	Brief
			November	---	---	---	---	None	Brief
			December	2.5-5.0	>6.0	---	---	None	Brief
CoB:									
Cowarts	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
CoC:									
Cowarts	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
CrD:									
Cowarts	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
CwE:									
Cowarts	C	High							
			Jan.-Dec.	---	---	---	---	None	---
Uchee	A	Medium							
			January	3.5-5.0	4.0-5.0	---	---	None	---
			February	3.5-5.0	4.0-5.0	---	---	None	---
			March	3.5-5.0	4.0-5.0	---	---	None	---
			April	3.5-5.0	4.0-5.0	---	---	None	---
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	---	---	---	---	None	---
			December	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Durati
				Ft	Ft	Ft			
DAM:									
Dam	---	---							
			Jan.-Dec.	---	---	---	---	None	---
EnB:									
Enon	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Wynott	C	High							
			Jan.-Dec.	---	---	---	---	None	---
EuA:									
Eunola	C	Low							
			January	1.5-2.5	>6.0	---	---	None	---
			February	1.5-2.5	>6.0	---	---	None	---
			March	1.5-2.5	>6.0	---	---	None	---
			April	1.5-2.5	>6.0	---	---	None	---
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	1.5-2.5	>6.0	---	---	None	---
			December	1.5-2.5	>6.0	---	---	None	---
FaA:									
Fluvaquents	D	Negligible							
			January	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			February	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			March	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			April	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			May	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			June	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			July	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			August	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			September	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			October	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			November	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
			December	0.0	>6.0	0.0-2.0	Very long	Frequent	Brief
GrA:									
Greenville	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Durati
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Durati
				Ft	Ft	Ft			
GrB:									
Greenville----------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
GuB:									
Greenville----------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Urban land----------------	---	---							
			Jan.-Dec.	---	---	---	---	None	---
GvD2:									
Gwinnett------------------	B	High							
			Jan.-Dec.	---	---	---	---	None	---
Lloyd---------------------	B	High							
			Jan.-Dec.	---	---	---	---	None	---
GwE2:									
Gwinnett------------------	B	Very high							
			Jan.-Dec.	---	---	---	---	None	---
Agricola------------------	C	Very high							
			Jan.-Dec.	---	---	---	---	None	---
HdB:									
Hard Labor----------------	B	Medium							
			January	2.5-5.0	4.0-5.0	---	---	None	---
			February	2.5-5.0	>6.0	---	---	None	---
			March	2.5-5.0	>6.0	---	---	None	---
			April	2.5-5.0	>6.0	---	---	None	---
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	2.5-5.0	>6.0	---	---	None	---
			December	2.5-5.0	>6.0	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
HdC:									
Hard Labor	B	Medium							
			January	2.5-5.0	4.0-5.0	---	---	None	---
			February	2.5-5.0	>6.0	---	---	None	---
			March	2.5-5.0	>6.0	---	---	None	---
			April	2.5-5.0	>6.0	---	---	None	---
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	2.5-5.0	>6.0	---	---	None	---
			December	2.5-5.0	>6.0	---	---	None	---
HiB2:									
Hiwassee	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
KnA:									
Kinston	D	Negligible							
			January	0.0-1.0	>6.0	---	---	None	Brief
			February	0.0-1.0	>6.0	---	---	None	Brief
			March	0.0-1.0	>6.0	---	---	None	Brief
			April	0.0-1.0	>6.0	---	---	None	Brief
			May	0.0-1.0	>6.0	---	---	None	Brief
			June	0.0-1.0	>6.0	---	---	None	Brief
			July	---	---	---	---	None	Brief
			August	---	---	---	---	None	Brief
			September	---	---	---	---	None	Brief
			October	---	---	---	---	None	Brief
			November	0.0-1.0	>6.0	---	---	None	Brief
			December	0.0-1.0	>6.0	---	---	None	Brief
Iuka	C	Negligible							
			January	1.0-3.0	>6.0	---	---	None	Brief
			February	1.0-3.0	>6.0	---	---	None	Brief
			March	1.0-3.0	>6.0	---	---	None	Brief
			April	1.0-3.0	>6.0	---	---	None	Brief
			December	1.0-3.0	>6.0	---	---	None	Brief
LdB2:									
Lloyd	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
LnB:									
Lloyd	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Urban land	---	---							
			Jan.-Dec.	---	---	---	---	None	---
LoF:									
Louisa	B	Very high							
			Jan.-Dec.	---	---	---	---	None	---
Mountain Park	B	High							
			Jan.-Dec.	---	---	---	---	None	---
LrD:									
Louisburg	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Rion	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Rock outcrop	D	---							
			Jan.-Dec.	---	---	---	---	None	---
LrE:									
Louisburg	B	High							
			Jan.-Dec.	---	---	---	---	None	---
Rion	B	High							
			Jan.-Dec.	---	---	---	---	None	---
Rock outcrop	D	---							
			Jan.-Dec.	---	---	---	---	None	---
MaB2:									
Madison	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
MaD2:									
Madison	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
MdE2:									
Madison	B	Very high							
			Jan.-Dec.	---	---	---	---	None	---
Louisa	B	High							
			Jan.-Dec.	---	---	---	---	None	---
MnA:									
Marvyn	B	Low							
			Jan.-Dec.	---	---	---	---	None	---
MrB:									
Marvyn	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
MwB2:									
Mecklenburg	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
MxD2:									
Mecklenburg	C	Medium							
			Jan.-Dec.	---	---	---	---	None	---
PaC2:									
Pacolet	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
PrD2:									
Pacolet	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Rion	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
PrE2:									
Pacolet	B	High							
			Jan.-Dec.	---	---	---	---	None	---
Rion	B	High							
			Jan.-Dec.	---	---	---	---	None	---
Pt:									
Pits	---	---							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
SgD:									
Springhill	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
TbD2:									
Tallapoosa	C	High							
			Jan.-Dec.	---	---	---	---	None	---
Badin	C	High							
			Jan.-Dec.	---	---	---	---	None	---
Fruithurst	C	High							
			Jan.-Dec.	---	---	---	---	None	---
TfE2:									
Tallapoosa	C	Very high							
			Jan.-Dec.	---	---	---	---	None	---
Fruithurst	C	Very high							
			Jan.-Dec.	---	---	---	---	None	---
ToA:									
Toccoa	B	Very low							
			January	2.5-5.0	>6.0	---	---	None	Brief
			February	2.5-5.0	>6.0	---	---	None	Brief
			March	2.5-5.0	>6.0	---	---	None	Brief
			April	2.5-5.0	>6.0	---	---	None	Brief
			May	---	---	---	---	None	Brief
			June	---	---	---	---	None	Brief
			November	---	---	---	---	None	Brief
			December	2.5-5.0	>6.0	---	---	None	Brief

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
Ur:									
Urban land----------------	---	---							
			January	---	---	---	---	None	---
			February	---	---	---	---	None	---
			March	---	---	---	---	None	---
			April	---	---	---	---	None	---
			May	---	---	---	---	None	---
			June	---	---	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	---	---	---	---	None	---
			December	---	---	---	---	None	---
WeC2:									
Wedowee-------------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
WeD2:									
Wedowee-------------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
WfE:									
Wedowee-------------------	B	High							
			Jan.-Dec.	---	---	---	---	None	---
WgC:									
Wedowee-------------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---
Saw-----------------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	---

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Durati
				Ft	Ft	Ft			
WhA:									
Wehadkee------------------	D	Negligible							
			January	0.0-1.0	>6.0	---	---	None	Brief
			February	0.0-1.0	>6.0	---	---	None	Brief
			March	0.0-1.0	>6.0	---	---	None	Brief
			April	0.0-1.0	>6.0	---	---	None	Brief
			May	0.0-1.0	>6.0	---	---	None	Brief
			June	0.0-1.0	>6.0	---	---	None	---
			July	---	---	---	---	None	---
			August	---	---	---	---	None	---
			September	---	---	---	---	None	---
			October	---	---	---	---	None	---
			November	0.0-1.0	>6.0	---	---	None	Brief
			December	0.0-1.0	>6.0	---	---	None	Brief
WkA:									
Wickham-------------------	B	Low							
			Jan.-Dec.	---	---	---	---	None	Very br
WkB:									
Wickham-------------------	B	Medium							
			Jan.-Dec.	---	---	---	---	None	Very br
WnD:									
Wynott--------------------	C	High							
			Jan.-Dec.	---	---	---	---	None	---
Winnsboro-----------------	C	High							
			Jan.-Dec.	---	---	---	---	None	---
WyE:									
Wynott--------------------	C	Very high							
			Jan.-Dec.	---	---	---	---	None	---
Wilkes--------------------	C	Very high							
			Jan.-Dec.	---	---	---	---	None	---

Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is no concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of cor	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	
		In	In				
AlA:							
Altavista	---	---	---	---	None	Moderate	Mo
AtB:							
Altavista	---	---	---	---	None	Moderate	Mo
BdB2:							
Badin	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Hi
Tatum	---	---	---	---	None	---	
Tallapoosa	Paralithic bedrock	10-20	40-50	Moderately cemented	None	---	
BfC:							
Badin	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Hi
Tallapoosa	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Low	Hi
Fruithurst	Paralithic bedrock	20-40	20-40	Moderately cemented	None	Low	Hi
BuA:							
Buncombe	---	---	---	---	None	Low	Mo
CdB:							
Cecil	---	---	---	---	None	High	Hi
Urban land	---	---	---	---	None	---	
CeB2:							
Cecil	---	---	---	---	None	High	Hi
CeC2:							
Cecil	---	---	---	---	None	High	Hi

Soil Features—Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of cor	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	
		In	In				
CHA:							
Chewacla	---	---	---	---	None	High	Mo
Cartecay	---	---	---	---	None	Low	Mo
Toccoa	---	---	---	---	None	Low	Mo
CoB:							
Cowarts	---	---	---	---	None	Moderate	Mo
CoC:							
Cowarts	---	---	---	---	None	Moderate	Mo
CrD:							
Cowarts	---	---	---	---	None	Moderate	Mo
CwE:							
Cowarts	---	---	---	---	None	Moderate	Mo
Uchee	---	---	---	---	None	Low	Hi
DAM:							
Dam	---	---	---	---	---	---	
EnB:							
Enon	---	---	---	---	None	High	Lo
Wynott	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Mo
EuA:							
Eunola	---	---	---	---	None	Low	Hi
FaA:							
Fluvaquents	---	---	---	---	None	High	Hi
GrA:							
Greenville	---	---	---	---	None	Moderate	Hi
GrB:							
Greenville	---	---	---	---	None	Moderate	Hi

Soil Features—Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of cor[rosion]	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	
		In	In				
GuB:							
Greenville	---	---	---	---	None	Moderate	Hi
Urban land	---	---	---	---	None	---	
GvD2:							
Gwinnett	Paralithic bedrock	40-60	30-40	Moderately cemented	None	High	Mo
Lloyd	---	---	---	---	None	High	Mo
GwE2:							
Gwinnett	Paralithic bedrock	40-60	30-40	Moderately cemented	None	High	Mo
Agricola	Paralithic bedrock	20-40	42-60	Moderately cemented	None	High	Mo
HdB:							
Hard Labor	---	---	---	---	None	High	Hi
HdC:							
Hard Labor	---	---	---	---	None	High	Hi
HiB2:							
Hiwassee	---	---	---	---	None	Moderate	Mo
KnA:							
Kinston	---	---	---	---	None	High	Hi
Iuka	---	---	---	---	None	Moderate	Hi
LdB2:							
Lloyd	---	---	---	---	None	Moderate	Mo
LnB:							
Lloyd	---	---	---	---	None	Moderate	Mo
Urban land	---	---	---	---	None	---	
LoF:							
Louisa	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Low	Mo

Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of cor: Uncoated steel	
		In	In				
Mountain Park----------	Paralithic bedrock	20-40	---	Moderately cemented	None	Moderate	Mo
LrD:							
Louisburg--------------	---	---	---	---	None	Low	Mo
Rion-------------------	---	---	---	---	None	Moderate	Mo
Rock outcrop-----------	---	---	---	---	None	---	
LrE:							
Louisburg--------------	---	---	---	---	None	Low	Mo
Rion-------------------	---	---	---	---	None	Moderate	Mo
Rock outcrop-----------	---	---	---	---	None	---	
MaB2:							
Madison----------------	---	---	---	---	None	High	Mo
MaD2:							
Madison----------------	---	---	---	---	None	High	Mo
MdE2:							
Madison----------------	---	---	---	---	None	High	Mo
Louisa-----------------	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Low	Mo
MnA:							
Marvyn-----------------	---	---	---	---	None	Moderate	Hi
MrB:							
Marvyn-----------------	---	---	---	---	None	Moderate	Hi
MwB2:							
Mecklenburg------------	---	---	---	---	None	High	Mo
MxD2:							
Mecklenburg------------	---	---	---	---	None	High	Mo
PaC2:							
Pacolet----------------	---	---	---	---	None	High	Hi

Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of cor…: Uncoated steel	Risk of cor…
		In	In				
PrD2:							
Pacolet	---	---	---	---	None	High	Hi
Rion	---	---	---	---	None	Moderate	Mo
PrE2:							
Pacolet	---	---	---	---	None	High	Hi
Rion	---	---	---	---	None	Moderate	Mo
Pt:							
Pits	---	---	---	---	None	---	
SgD:							
Springhill	---	---	---	---	None	Moderate	Mo
TbD2:							
Tallapoosa	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Low	Hi
Badin	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Hi
Fruithurst	Paralithic bedrock	20-40	20-40	Moderately cemented	None	Low	Hi
TfE2:							
Tallapoosa	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Low	Hi
Fruithurst	Paralithic bedrock	20-40	20-40	Moderately cemented	None	Low	Hi
ToA:							
Toccoa	---	---	---	---	None	Low	Mo
Ur:							
Urban land	---	---	---	---	None	---	
WeC2:							
Wedowee	---	---	---	---	None	Moderate	Hi
WeD2:							
Wedowee	---	---	---	---	None	Moderate	Hi

Soil Features—Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of cor	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	
		In	In				
WfE:							
Wedowee	---	---	---	---	None	Moderate	Hi
WgC:							
Wedowee	---	---	---	---	None	Moderate	Hi
Saw	Lithic bedrock	20-40	20-40	Very strongly cemented	None	Moderate	Mo
WhA:							
Wehadkee	---	---	---	---	None	High	Mo
WkA:							
Wickham	---	---	---	---	None	Moderate	Hi
WkB:							
Wickham	---	---	---	---	None	Moderate	Hi
WnD:							
Wynott	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Mo
Winnsboro	Paralithic bedrock	40-60	12-32	Moderately cemented	None	High	Lo
WyE:							
Wynott	Paralithic bedrock	20-40	20-40	Moderately cemented	None	High	Mo
Wilkes	Paralithic bedrock	10-20	40-50	Moderately cemented	None	Moderate	Mo

Taxonomic Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Agricola	Fine, kaolinitic, thermic Rhodic Kanhapludults
Altavista	Fine-loamy, mixed, semiactive, thermic Aquic Hapludults
Badin	Fine, mixed, semiactive, thermic Typic Hapludults
Buncombe	Mixed, thermic Typic Udipsamments
Cartecay	Coarse-loamy, mixed, semiactive, nonacid, thermic Aquic Udifluvents
Cecil	Fine, kaolinitic, thermic Typic Kanhapludults
Chewacla	Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts
Cowarts	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Enon	Fine, mixed, active, thermic Ultic Hapludalfs
Eunola	Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults
Fluvaquents	Fluvaquents
Fruithurst	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Greenville	Fine, kaolinitic, thermic Rhodic Kandiudults
Gwinnett	Fine, kaolinitic, thermic Rhodic Kanhapludults
Hard Labor	Fine, kaolinitic, thermic Oxyaquic Kanhapludults
*Hiwassee	Fine, kaolinitic, thermic Rhodic Kanhapludults
Iuka	Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents
Kinston	Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts
Lloyd	Fine, kaolinitic, thermic Rhodic Kanhapludults
Louisa	Loamy, micaceous, thermic, shallow Typic Dystrudepts
Louisburg	Coarse-loamy, mixed, semiactive, thermic Typic Hapludults
Madison	Fine, kaolinitic, thermic Typic Kanhapludults
Marvyn	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Mecklenburg	Fine, mixed, active, thermic Ultic Hapludalfs
Mountain Park	Fine-loamy, micaceous, thermic Typic Hapludults
Pacolet	Fine, kaolinitic, thermic Typic Kanhapludults
Rion	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Saw	Fine, kaolinitic, thermic Typic Kanhapludults
Springhill	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Tallapoosa	Loamy, mixed, semiactive, thermic, shallow Typic Hapludults
Tatum	Fine, mixed, semiactive, thermic Typic Hapludults
Toccoa	Coarse-loamy, mixed, active, nonacid, thermic Typic Udifluvents
Uchee	Loamy, kaolinitic, thermic Arenic Kanhapludults
Wedowee	Fine, kaolinitic, thermic Typic Kanhapludults
Wehadkee	Fine-loamy, mixed, active, nonacid, thermic Fluvaquentic Endoaquepts
Wickham	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Wilkes	Loamy, mixed, active, thermic, shallow Typic Hapludalfs
Winnsboro	Fine, mixed, active, thermic Typic Hapludalfs
Wynott	Fine, mixed, active, thermic Typic Hapludalfs

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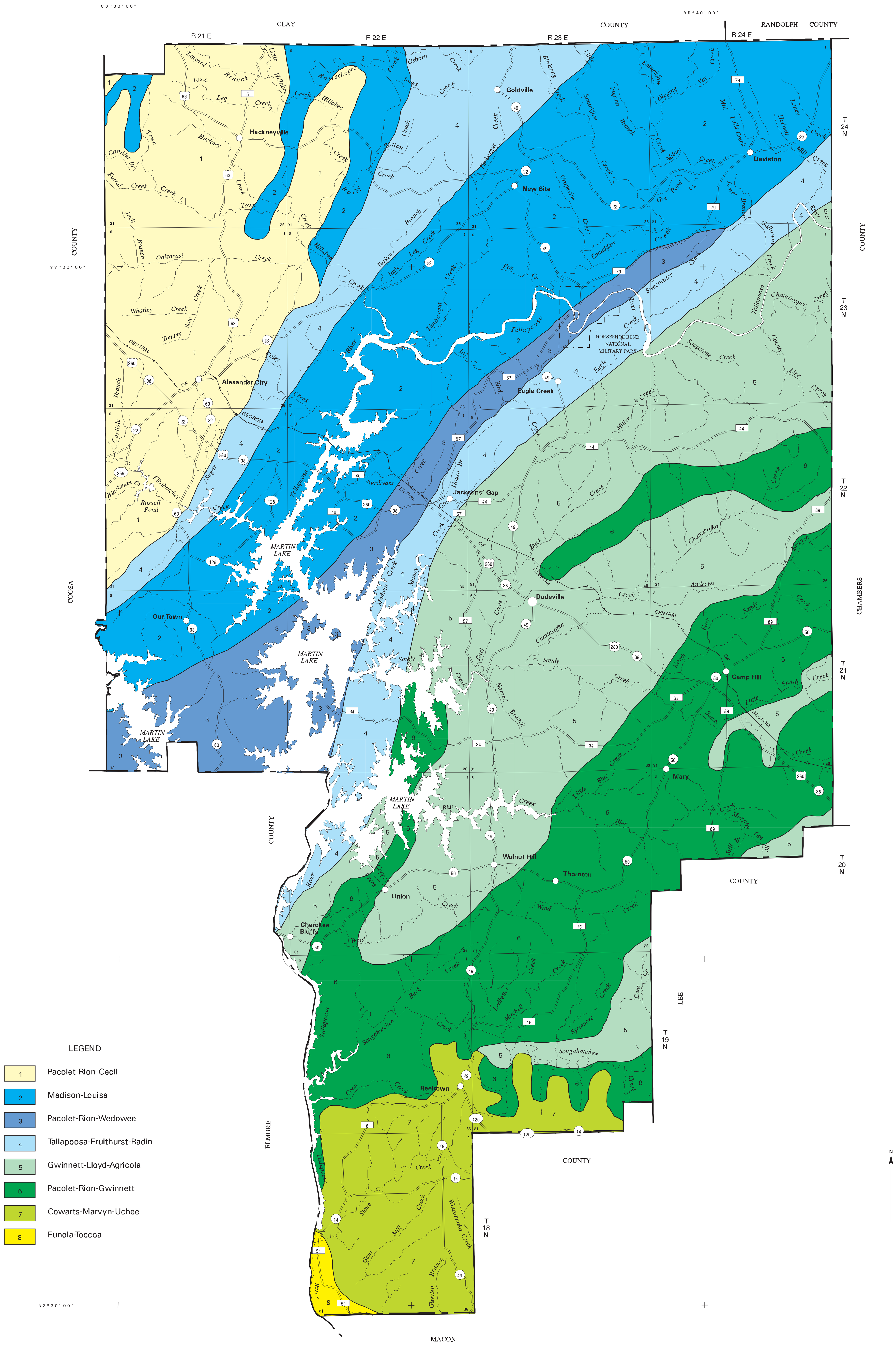


SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
In cooperation with
ALABAMA AGRICULTURAL EXPERIMENT STATION
and the
ALABAMA SOIL AND WATER CONSERVATION COMMITTEE

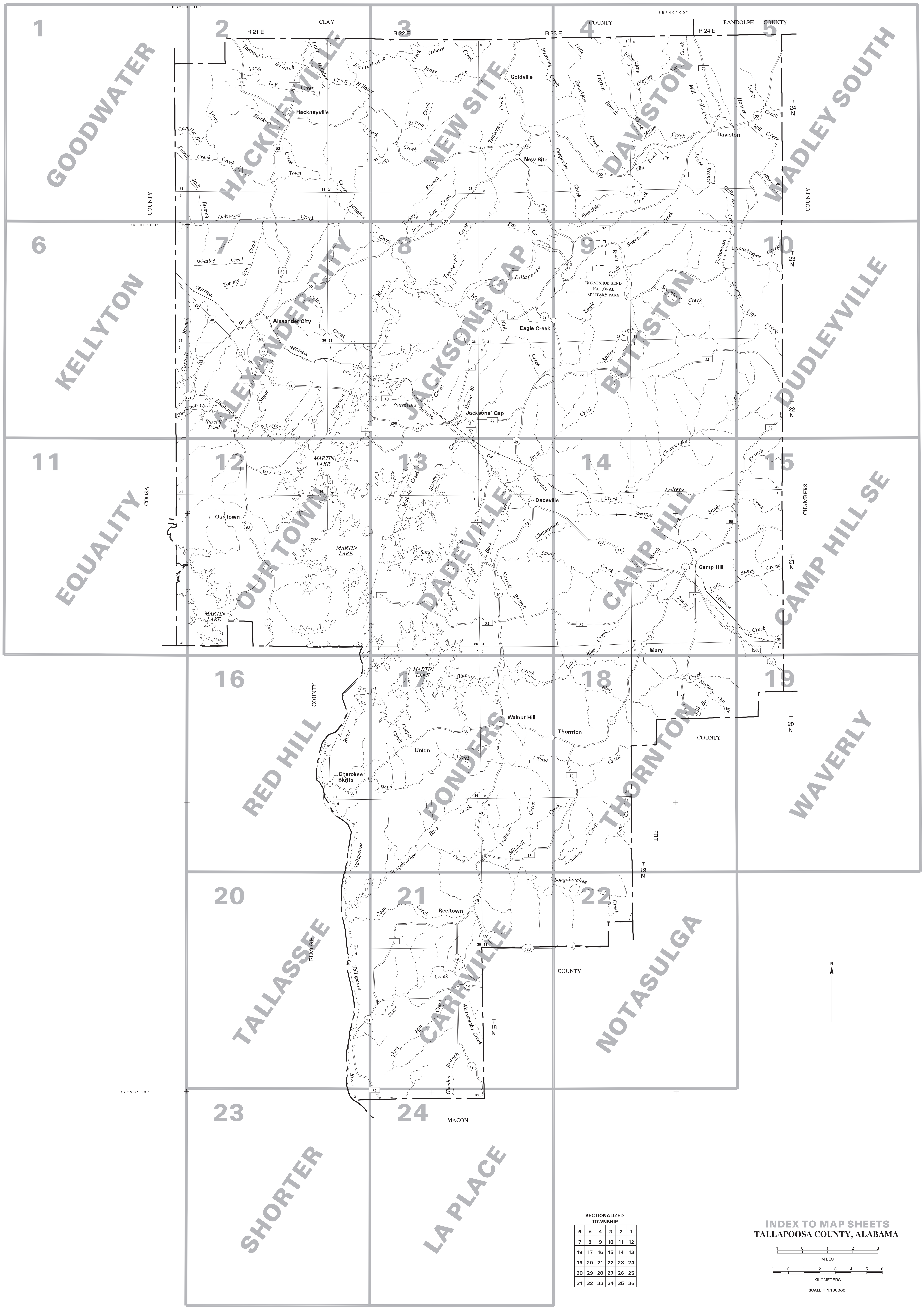
GENERAL SOIL MAP
TALLAPOOSA COUNTY, ALABAMA

1 0 1 2 3
MILES

1 0 1 2 3 4 5 6
KILOMETERS

SCALE = 1:130000

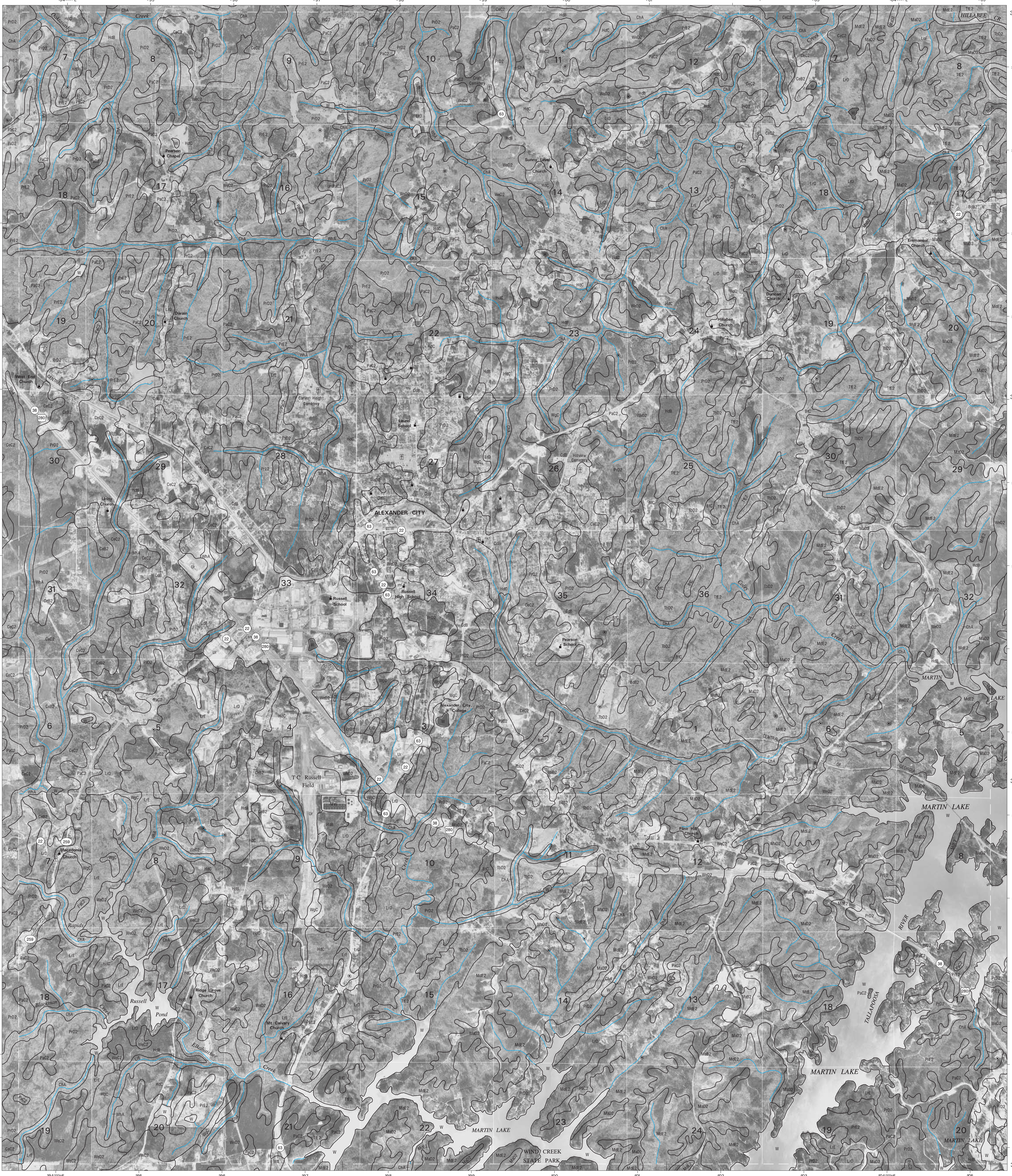
Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



1 GOODWATER
2 HACKNEYVILLE
3 NEW SITE
4 DAVISTON
5 WADLEY SOUTH
6 KELLYTON
7 ALEXANDER CITY
8 JACKSONS GAP
9 BUTTSTON
10 DUDLEYVILLE
11 EQUALITY
12 OUR TOWN
13 DADEVILLE
14 CAMP HILL
15 CAMP HILL SE
16 RED HILL
17 PONDERS
18 THORNTON
19 WAVERLY
20 TALLASSEE
21 CARRVILLE
22 NOTASULGA
23 SHORTER
24 LA PLACE
CLAY COUNTY
RANDOLPH COUNTY
COOSA COUNTY
CHAMBERS COUNTY
LEE COUNTY
ELMORE COUNTY
MACON COUNTY
R 21 E
R 22 E
R 23 E
R 24 E
T 24 N
T 23 N
T 22 N
T 21 N
T 20 N
T 19 N
T 18 N
Hackneyville
Goldville
New Site
Daviston
Alexander City
Eagle Creek
Jacksons' Gap
Dadeville
Our Town
Camp Hill
Mary
Walnut Hill
Thornton
Union
Cherokee Bluffs
Reeltown
HORSESHOE BEND NATIONAL MILITARY PARK
MARTIN LAKE
Russell Pond
SECTIONALIZED TOWNSHIP
6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36
INDEX TO MAP SHEETS
TALLAPOOSA COUNTY, ALABAMA
MILES
KILOMETERS
SCALE = 1:130000

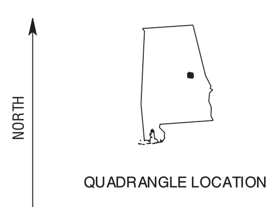
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
ALEXANDER CITY QUADRANGLE
SHEET NUMBER 7 OF 24



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1997 aerial photography. Public Land Survey System (PLSS), hydrography and cultural information were compiled from U.S. Geological Survey topographic maps. The hydrography and PLSS layers were edited to conform with features represented on the publication imagery and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

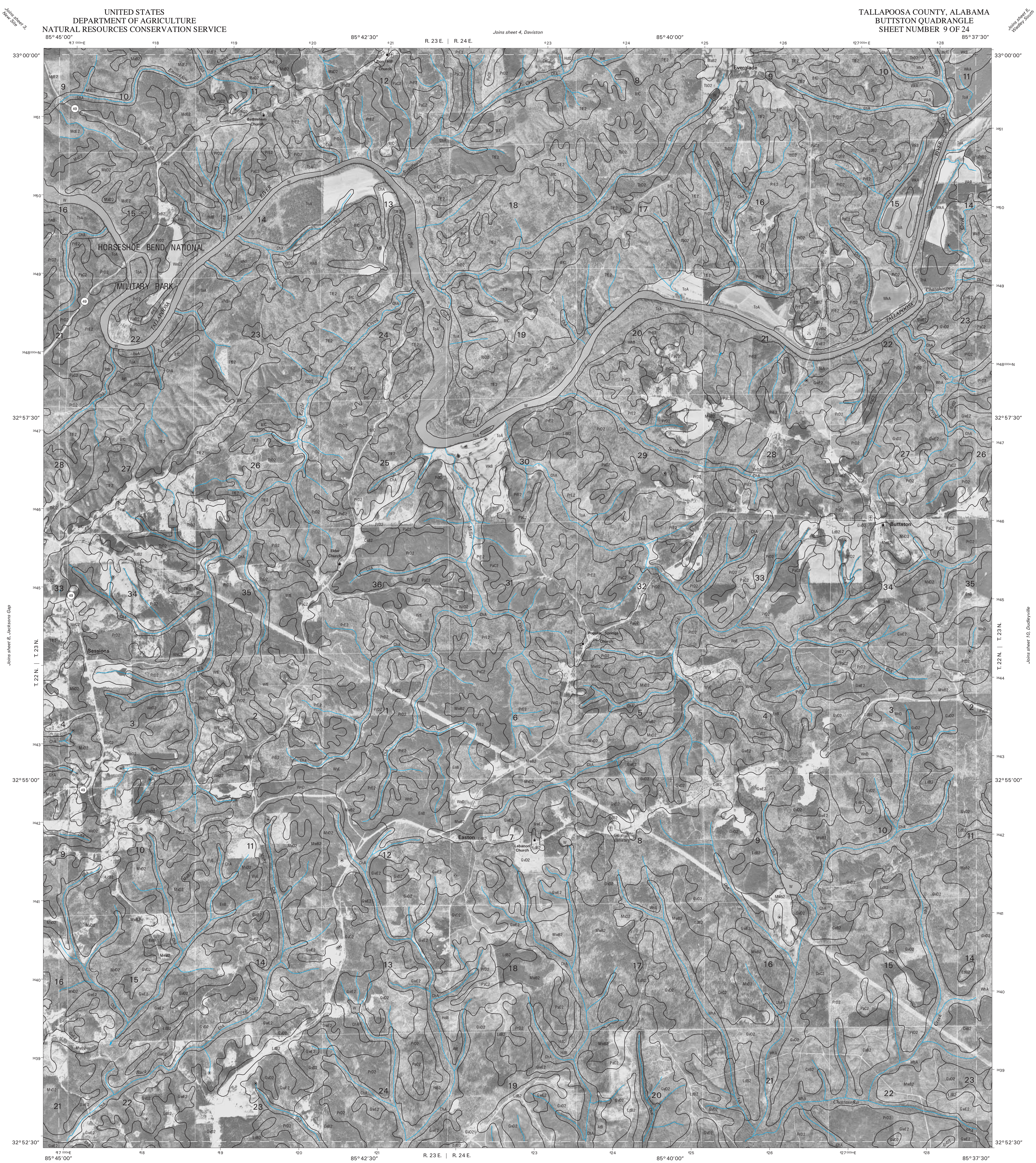
KILOMETERS

ALEXANDER CITY, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 7 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
BUTTSTON QUADRANGLE
SHEET NUMBER 9 OF 24



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

BUTTSTON, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 9 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

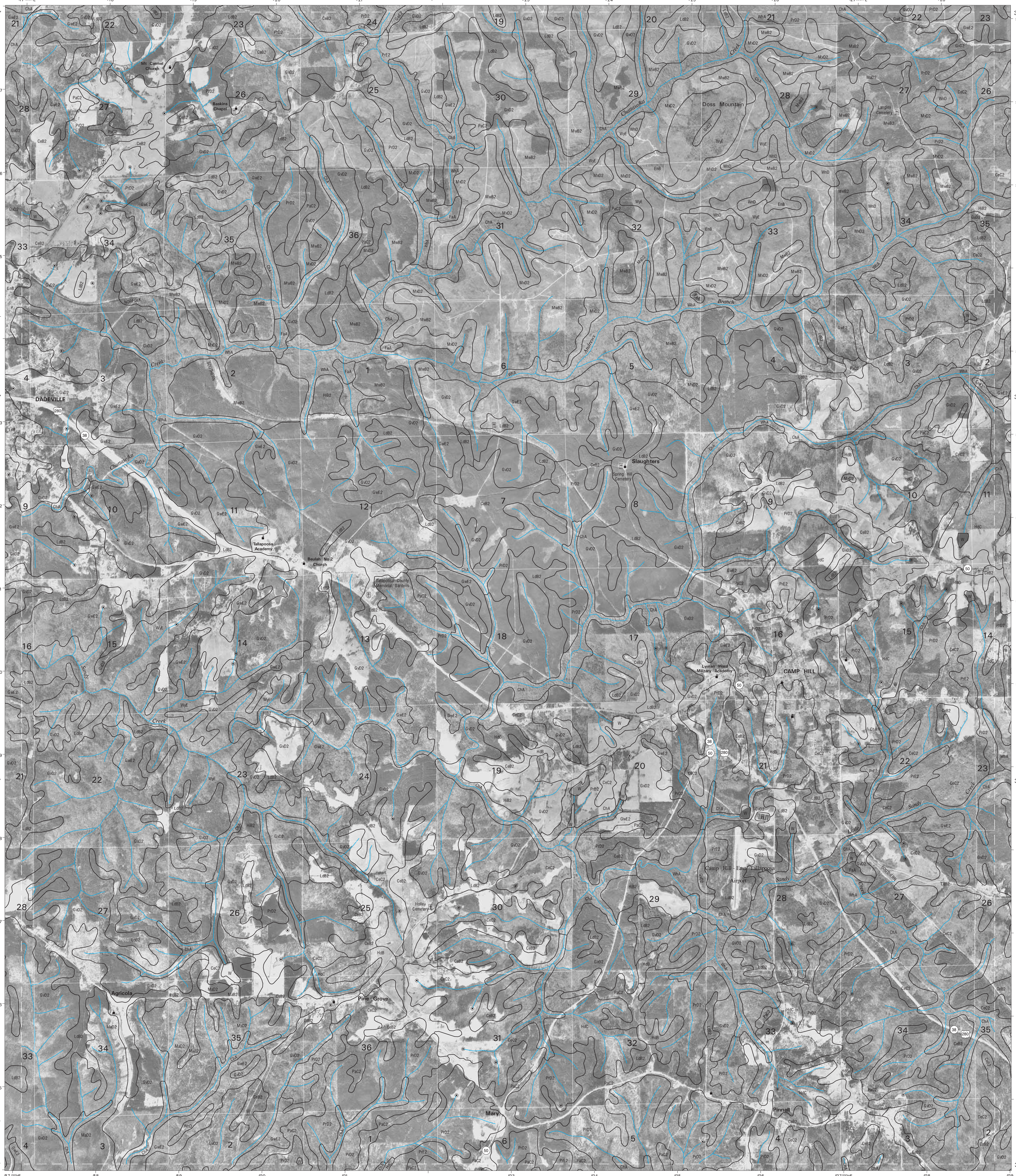
Joins sheet 8, Jacksons Gap

Joins sheet 9, Buttston

Joins sheet 10, Dudleyville

85° 45′00″ 85° 42′30″ R. 23 E. | R. 24 E. 85° 40′00″ 85° 37′30″

32° 52′30″



32° 50′00″

32° 47′30″

32° 45′00″

Joins sheet 13, Dadeville

Joins sheet 15, Camp Hill SE

85° 45′00″ 85° 42′30″ R. 23 E. | R. 24 E. 85° 40′00″ 85° 37′30″

Joins sheet 17, Ponders

Joins sheet 18, Thornton

Joins sheet 19, Waverly

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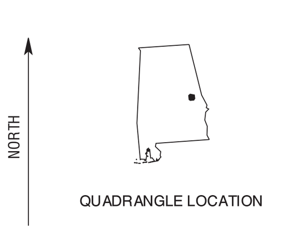

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

CAMP HILL, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 24

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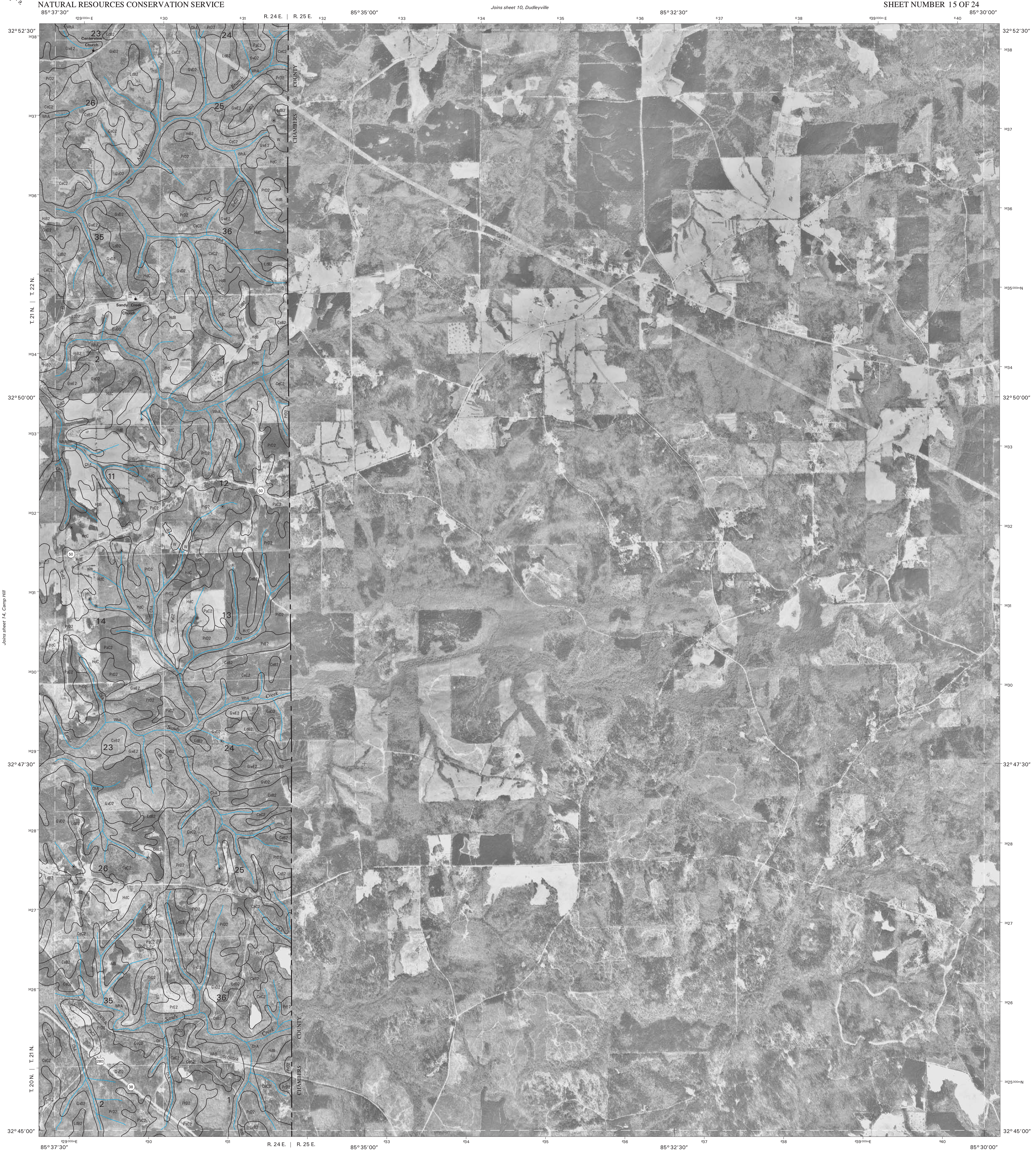
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
CAMP HILL SE QUADRANGLE
SHEET NUMBER 15 OF 24



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

CAMP HILL SE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

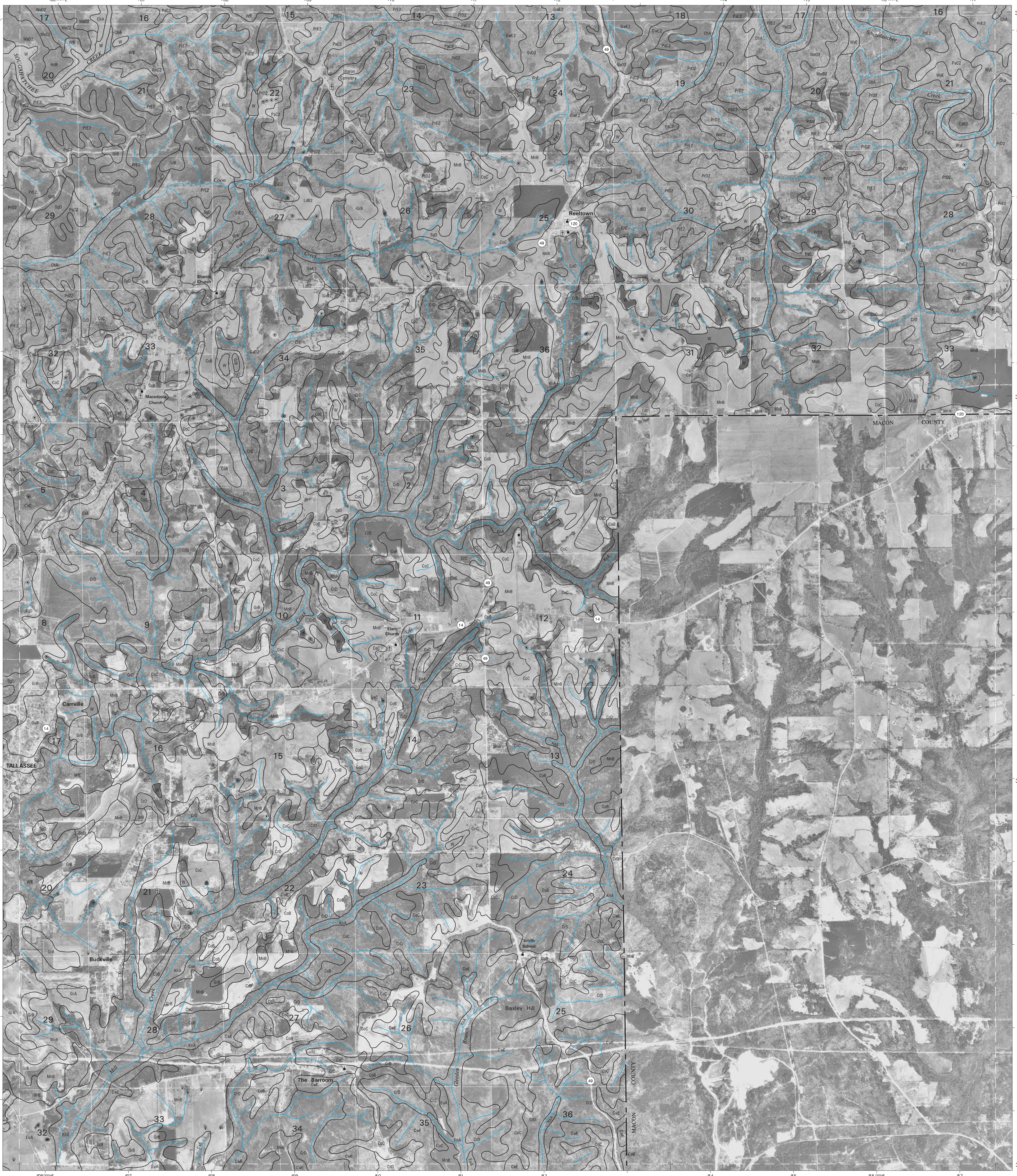
TALLAPOOSA COUNTY, ALABAMA
CARRVILLE QUADRANGLE
SHEET NUMBER 21 OF 24

Joins sheet 16, Red Hill

Joins sheet 17, Ponders

Joins sheet 18, Thornton

85° 52'30" 85° 50'00" R. 22 E. | R. 23 E. 85° 47'30" 85° 45'00"



32° 37'30"

32° 35'00"

32° 32'30"

32° 30'00"

Joins sheet 20, Tallassee

Joins sheet 22, Notasulga

85° 52'30" 85° 50'00" R. 22 E. | R. 23 E. 85° 47'30" 85° 45'00"

Joins sheet 23, Shorter

Joins sheet 24, La Place

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

CARRVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

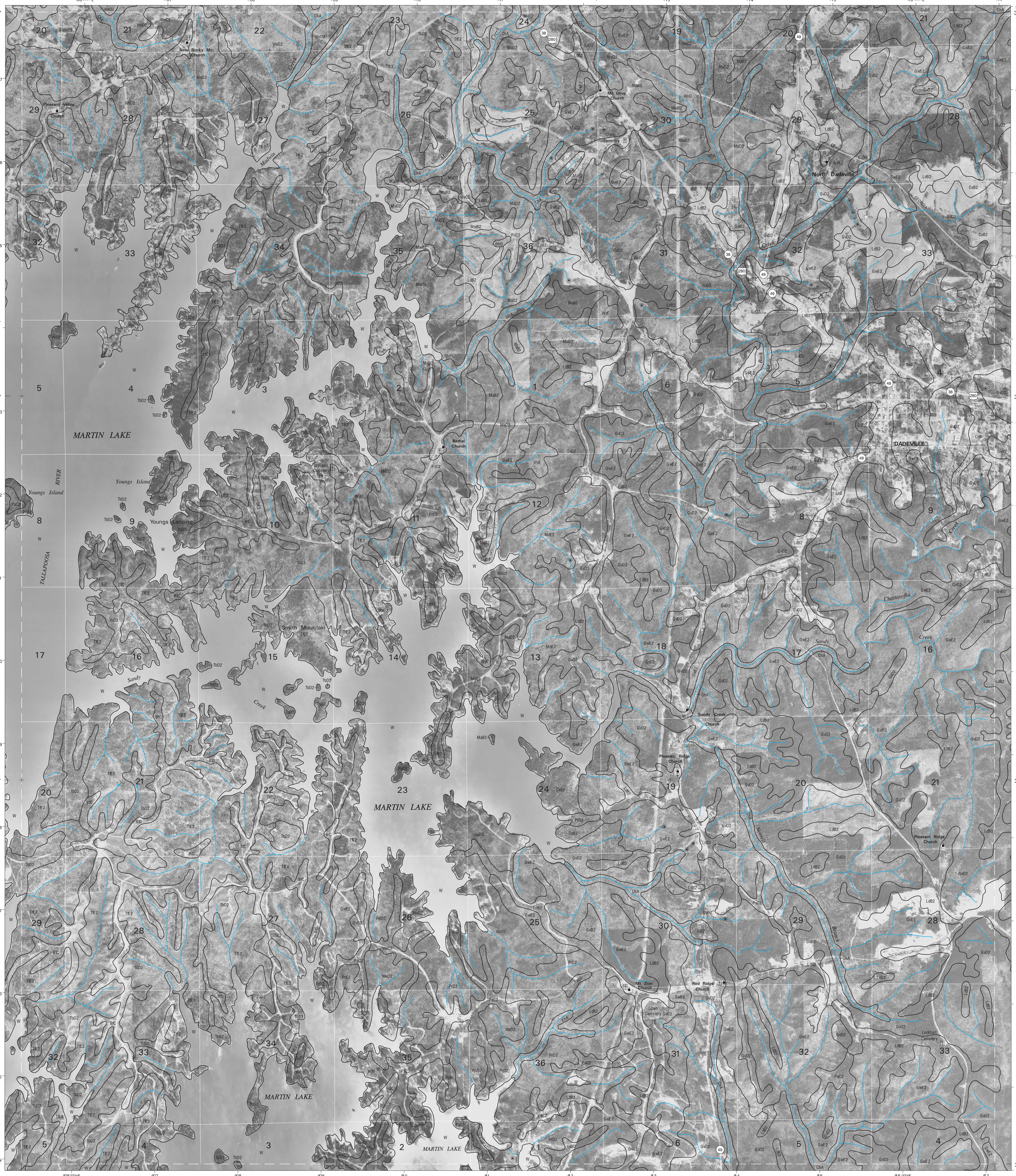
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
DADEVILLE QUADRANGLE
SHEET NUMBER 13 OF 24

Joins sheet 7, Alexander City

Joins sheet 8, Jacksons Gap

Joins sheet 9, Buttston



Joins sheet 12, Our Town

Joins sheet 14, Camp Hill

Joins sheet 16, Red Hill

Joins sheet 17, Ponders

Joins sheet 18, Thornton

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

DADEVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 24

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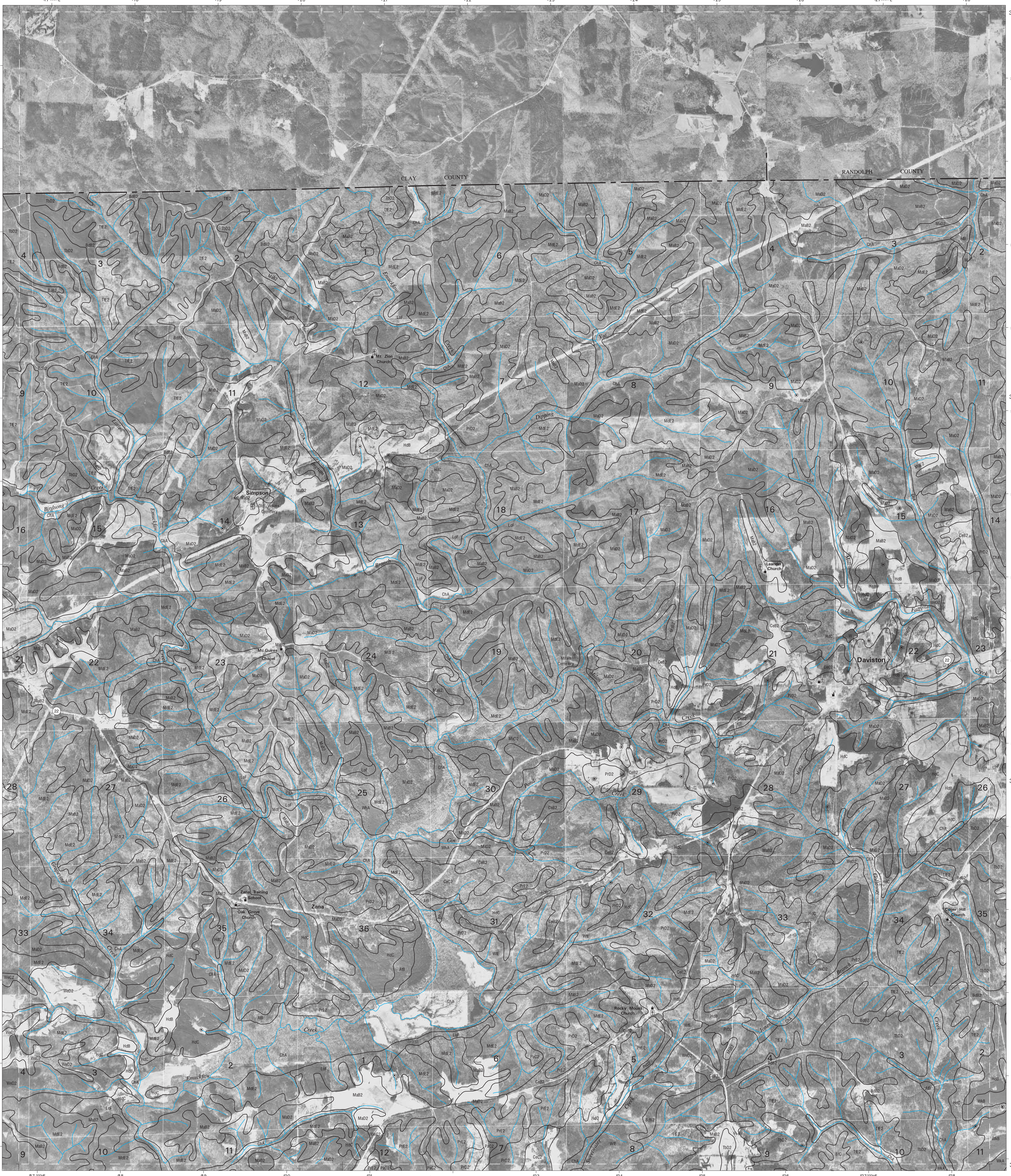
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
DAVISTON QUADRANGLE
SHEET NUMBER 4 OF 24



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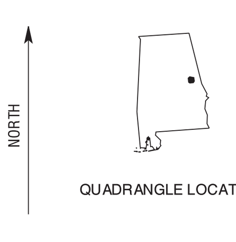
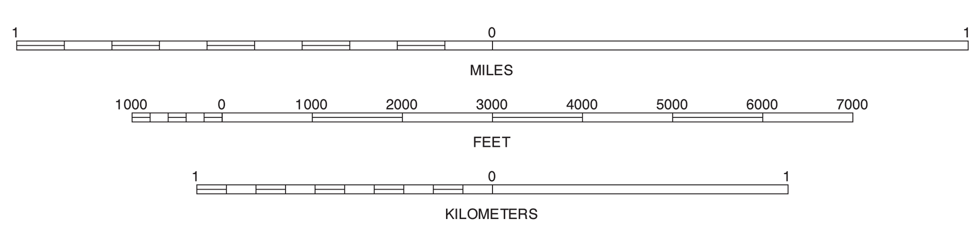


QUADRANGLE LOCATION

SCALE 1:24000



DAVISTON, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 4 OF 24

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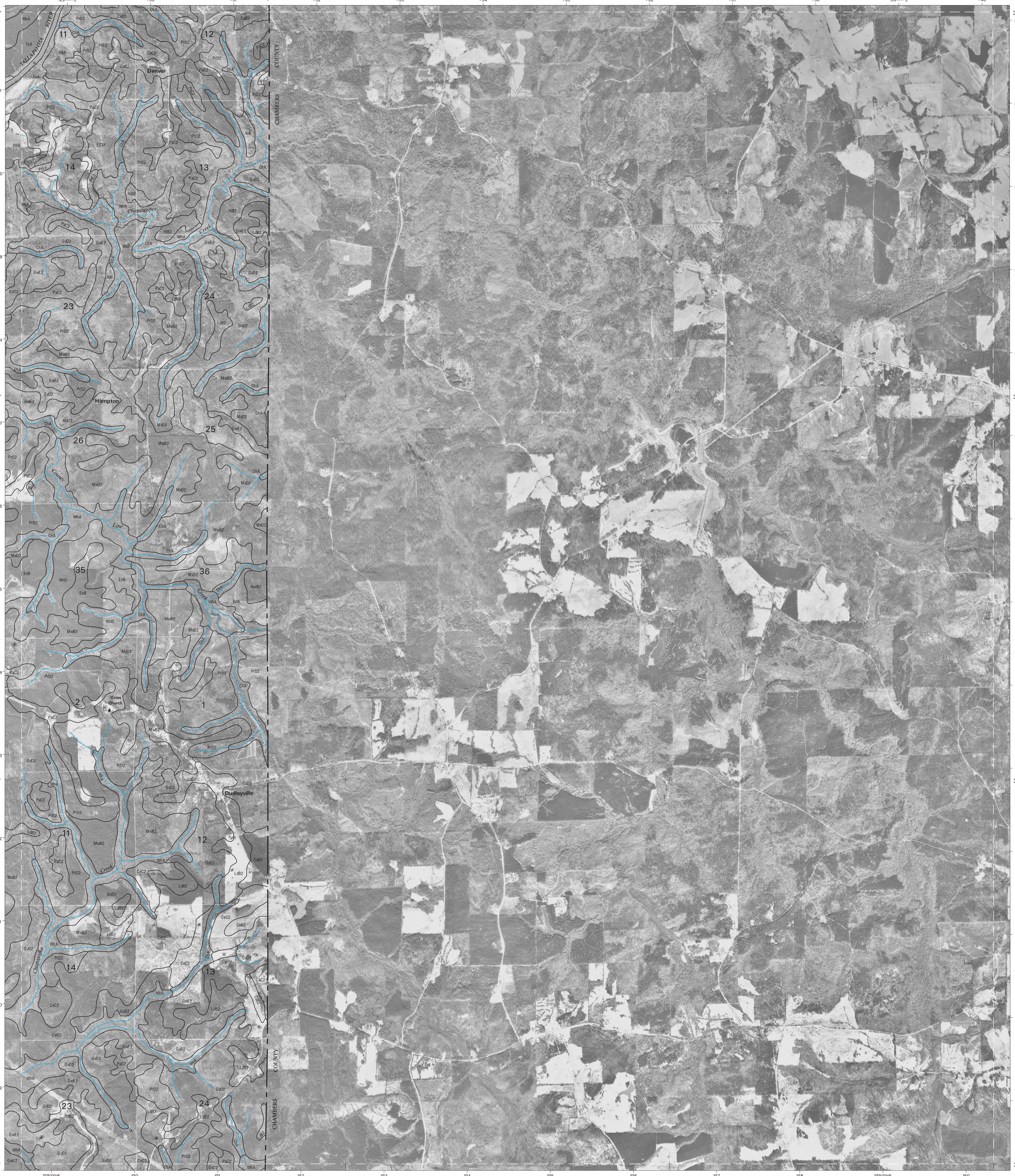
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
DUDLEYVILLE QUADRANGLE
SHEET NUMBER 10 OF 24



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

DUDLEYVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 24

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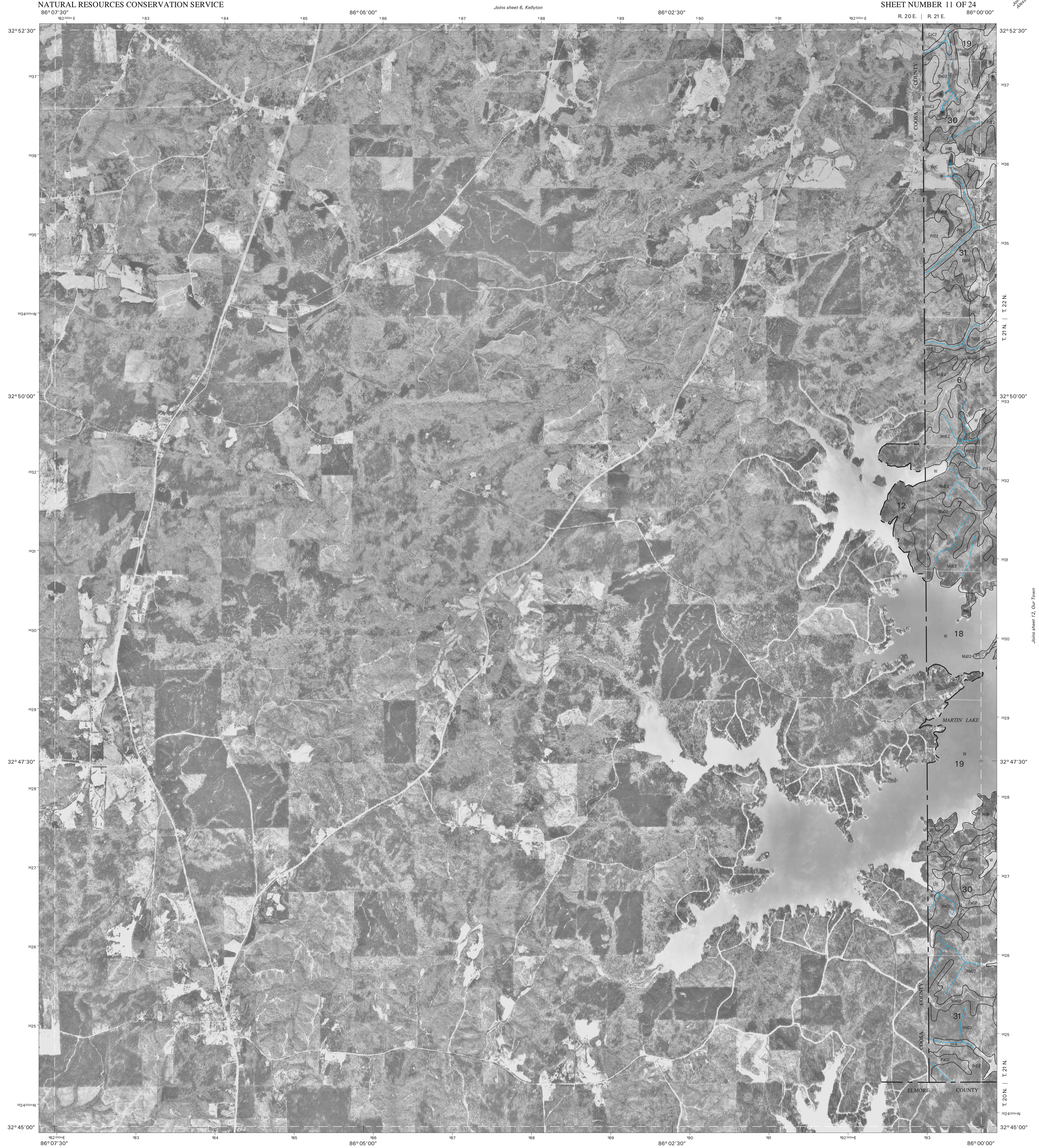
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
EQUALITY QUADRANGLE
SHEET NUMBER 11 OF 24



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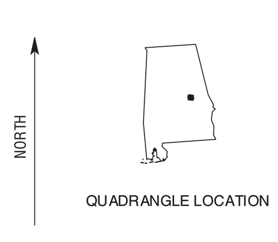
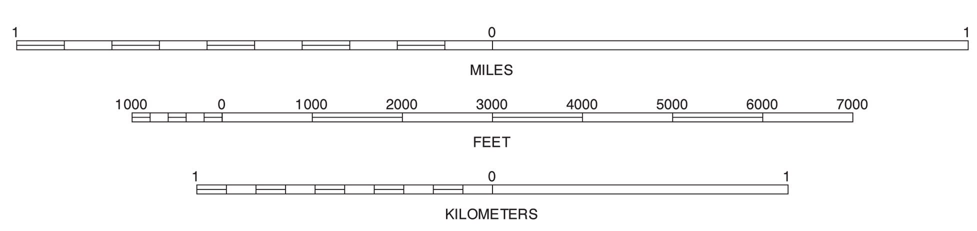


SCALE 1:24000



EQUALITY, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 24

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UNITED STATES
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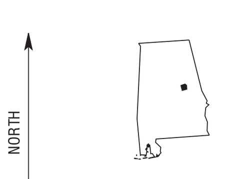

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

GOODWATER, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 1 OF 24

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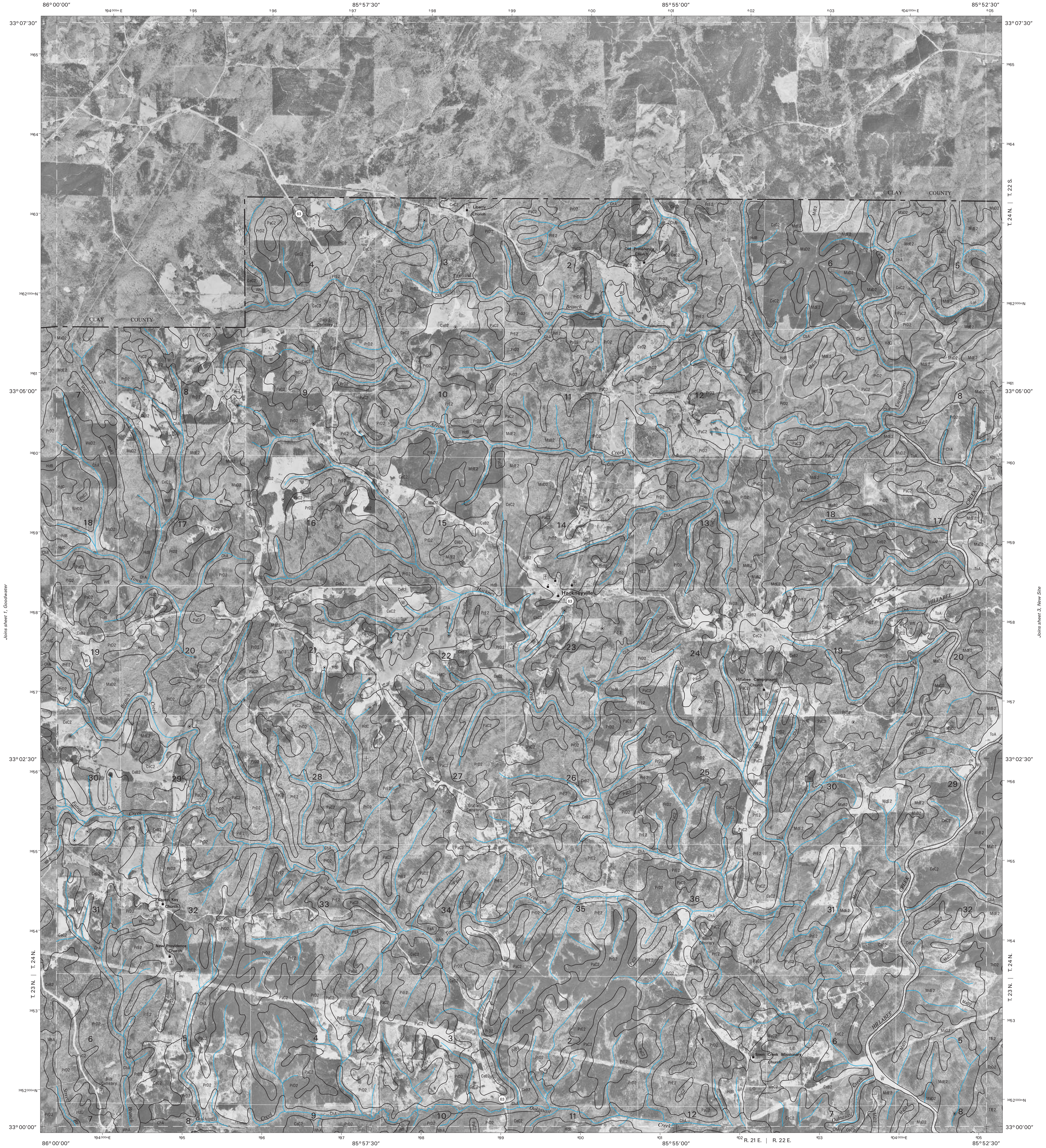
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
HACKNEYVILLE QUADRANGLE
SHEET NUMBER 2 OF 24



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

HACKNEYVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 24

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
JACKSONS GAP QUADRANGLE
SHEET NUMBER 8 OF 24

Joins sheet 2, Hackneyville

Joins sheet 3, New Site

Joins sheet 4, Daviston

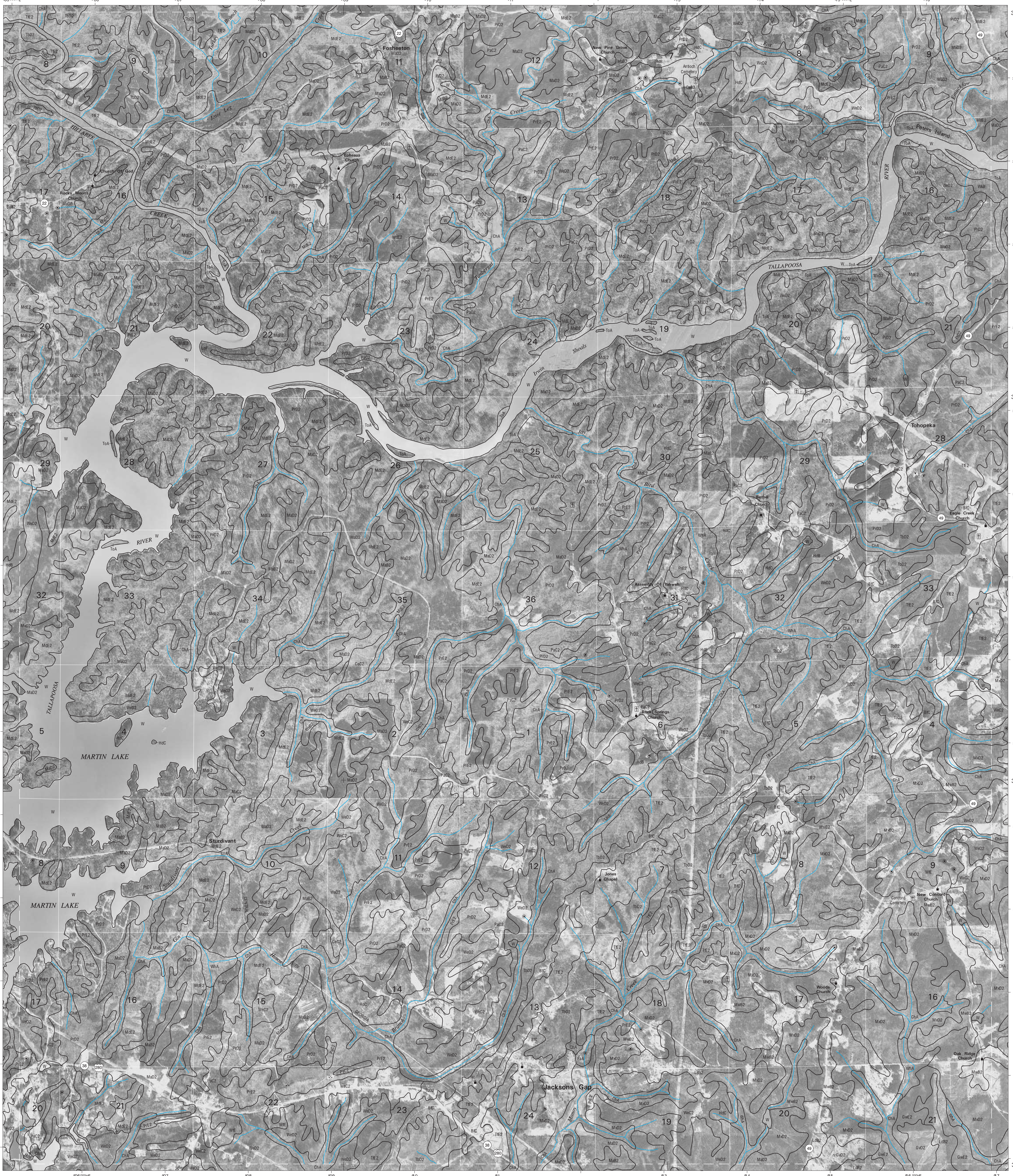
Joins sheet 7, Alexander City

Joins sheet 9, Buttston

Joins sheet 12, Our Town

Joins sheet 13, Dadeville

Joins sheet 14, Camp Hill



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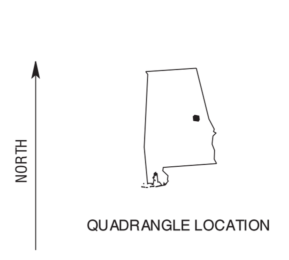

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

JACKSONS GAP, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 24

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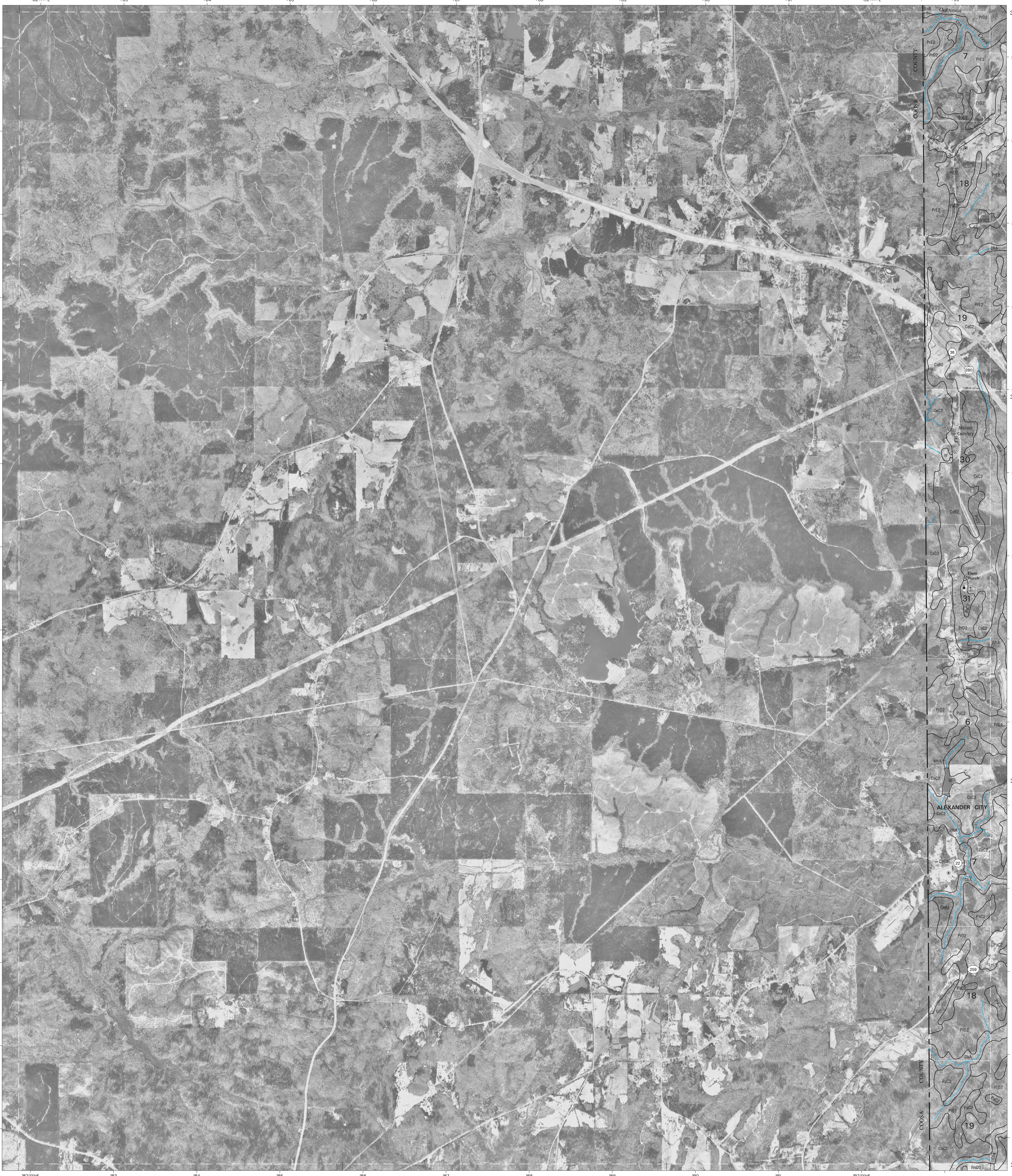
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
KELLYTON QUADRANGLE
SHEET NUMBER 6 OF 24



SCALE 1:24000

MILES

FEET

KILOMETERS

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North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUADRANGLE LOCATION

KELLYTON, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 6 OF 24

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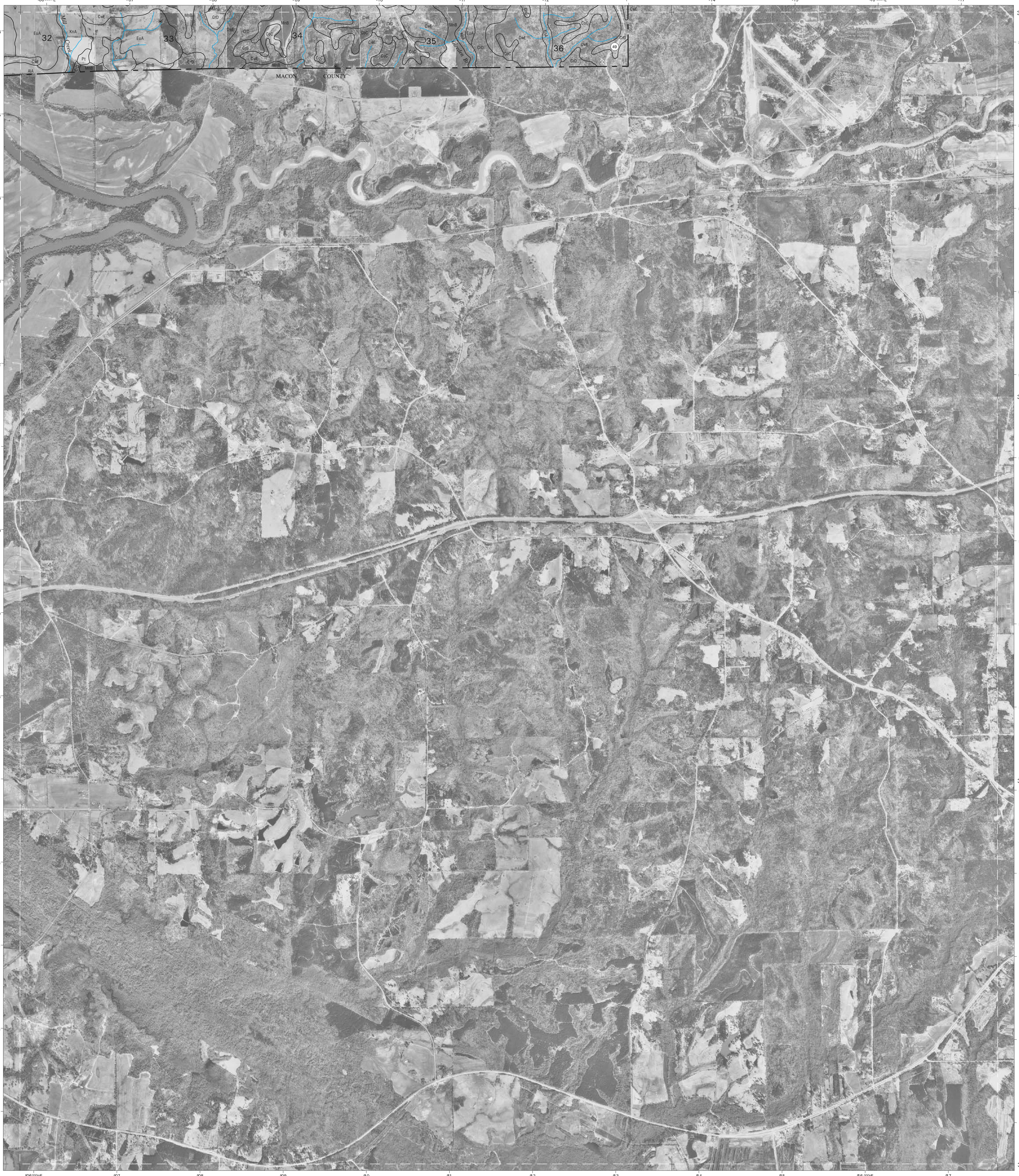
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
LA PLACE QUADRANGLE
SHEET NUMBER 24 OF 24



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

LA PLACE, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 24 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

LEGEND

etical. The first letter, always a capital, is the initial letter
er, except in undifferentiated map units, in which case it is
me taxon in the map unit or is used for alphabetical
pital and indicates the class of slope. The fourth
tes an eroded phase of the mapping unit.

NAME

ercent slopes, rarely flooded
2 to 6 percent slopes, rarely flooded

omplex, 2 to 6 percent slopes, moderately eroded
t complex, 3 to 10 percent slopes
to 2 percent slopes, frequently flooded

2 to 6 percent slopes
rcent slopes, moderately eroded
percent slopes, moderately eroded
Toccoa soils, 0 to 1 percent slopes, frequently flooded
5 percent slopes
8 percent slopes
am, 8 to 15 percent slopes
15 to 25 percent slopes

o 6 percent slopes
percent slopes

nt slopes, ponded

o 2 percent slopes
o 5 percent slopes
plex, 0 to 5 percent slopes
to 15 percent slopes, moderately eroded
, 15 to 25 percent slopes, moderately eroded

to 6 percent slopes
to 10 percent slopes
cent slopes, moderately eroded

1 percent slopes, frequently flooded

slopes, moderately eroded
2 to 6 percent slopes
plex, 30 to 50 percent slopes
op complex, 6 to 15 percent slopes, very bouldery
op complex, 15 to 35 percent slopes, very bouldery

2 to 6 percent slopes, moderately eroded
6 to 15 percent slopes, moderately eroded
15 to 30 percent slopes, moderately eroded
percent slopes
percent slopes

y loam, 2 to 6 percent slopes, moderately eroded
, 6 to 15 percent slopes, moderately eroded

m, 3 to 10 percent slopes, moderately eroded
o 15 percent slopes, moderately eroded, stony
to 25 percent slopes, moderately eroded, stony

15 percent slopes

t complex, 6 to 15 percent slopes, moderately eroded
plex, 15 to 40 percent slopes, moderately eroded
to 2 percent slopes, occasionally flooded

oam, 3 to 10 percent slopes, moderately eroded
oam, 6 to 15 percent slopes, moderately eroded
ndy loam, 15 to 35 percent slopes
: to 10 percent slopes, very bouldery
? percent slopes, frequently flooded
2 percent slopes, rarely flooded
6 percent slopes, rarely flooded
x, 6 to 15 percent slopes, very stony
5 to 45 percent slopes, very stony

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

SOIL SURVEY FEATURES

SOIL DELINEATIONS AND SYMBOLS — ArC HaB

STANDARD LANDFORM AND MISCELLANEOUS SURFACE FEATURES

- Borrow pit
- Gravel pit
- Mine or quarry
- Perennial water
- Rock outcrop
- Wet spot

CULTURAL FEATURES

BOUNDARIES

- County or parish
- Reservation (national forest or park, state forest or park)
- Field sheet matchline and neatline

PUBLIC LAND SURVEY SYSTEM SECTION BOUNDARY

PUBLIC LAND SURVEY SYSTEM SECTION CORNERTICS

ROAD EMBLEMS AND DESIGNATIONS

- Federal — 287
- State — 287
- County, farm or ranch — 1283

LOCATED OBJECTS

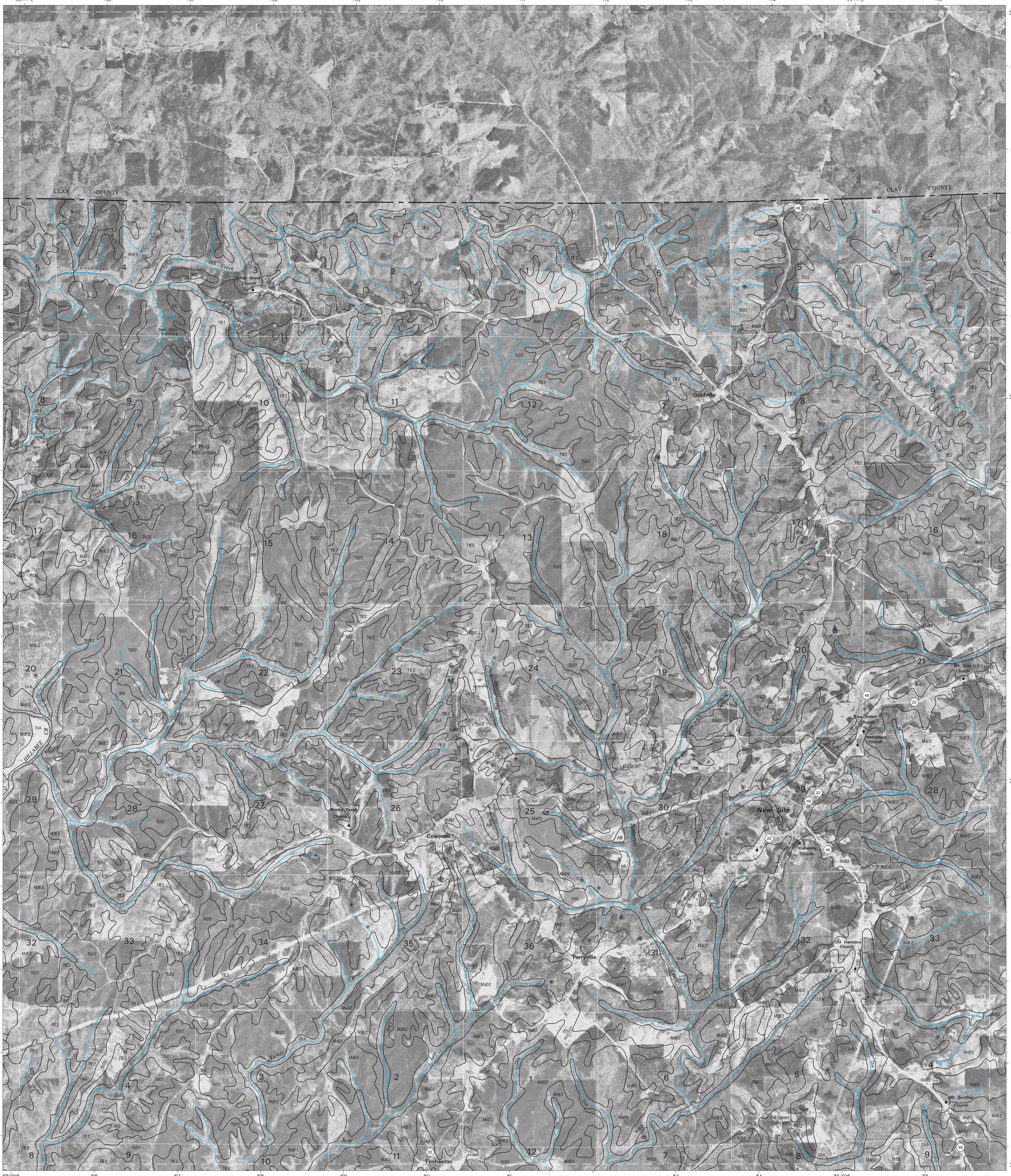
- Airport, airfield
- Cemetery
- Church
- Located object — Ranger Station
- School

HYDROGRAPHIC FEATURES

- Unclassified stream

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
NEW SITE QUADRANGLE
SHEET NUMBER 3 OF 24



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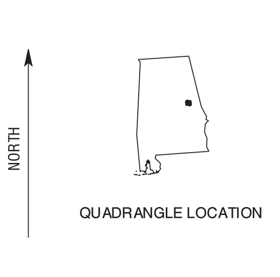
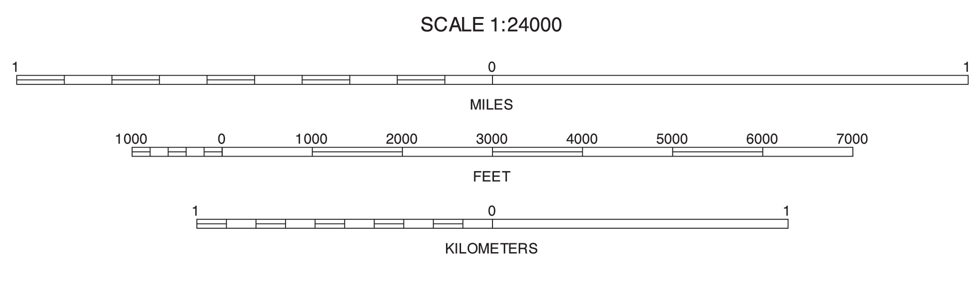
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



NEW SITE, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 3 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

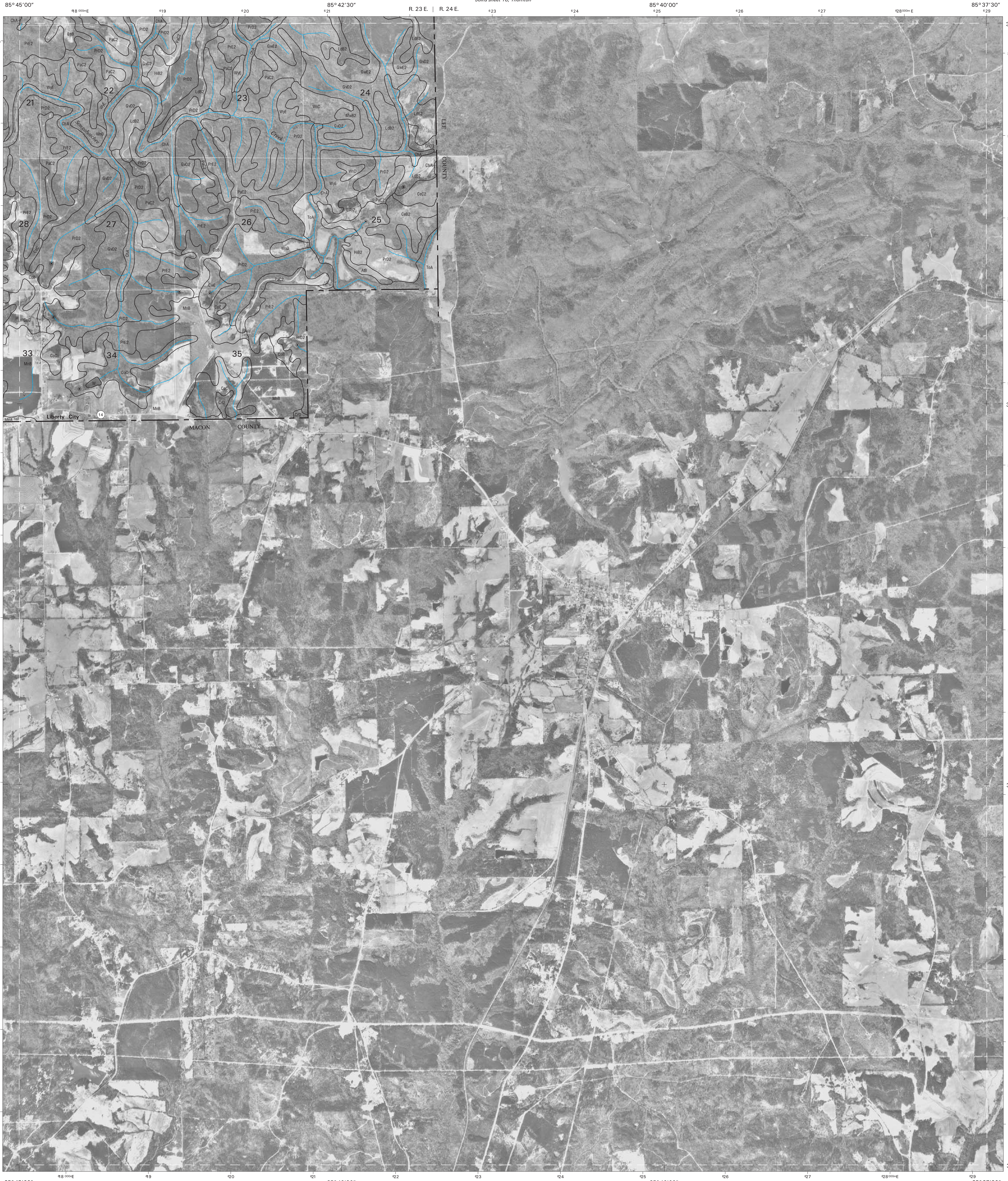
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
NOTASULGA QUADRANGLE
SHEET NUMBER 22 OF 24

Joins sheet 17, Pumbers

Joins sheet 18, Thornton

Joins sheet 19, Waverly



Joins sheet 21, Carrville

Joins sheet 24, La Place

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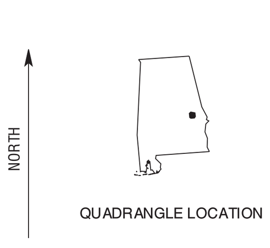
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

NOTASULGA, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 22 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 6, Kellyton

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

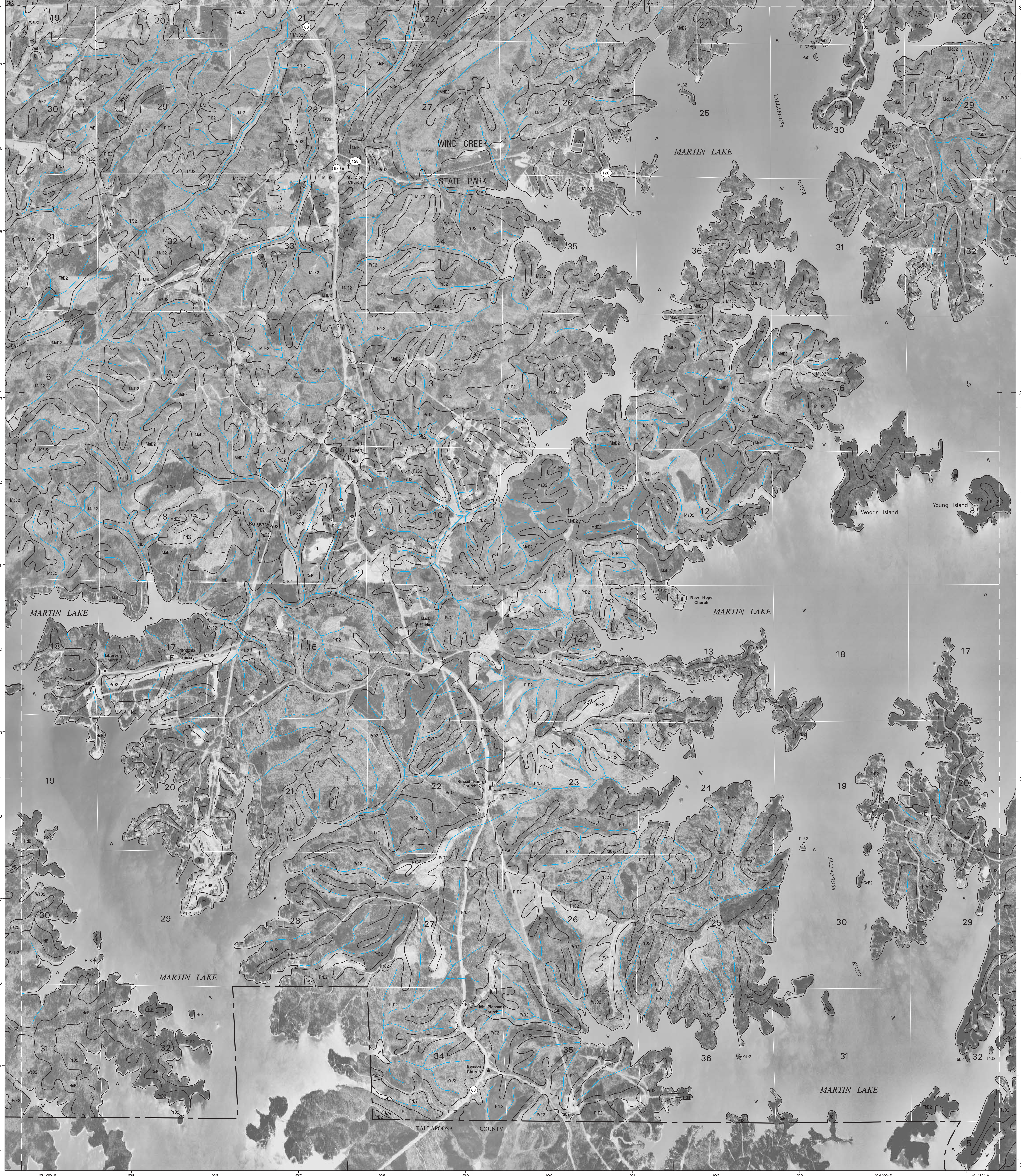
TALLAPOOSA COUNTY, ALABAMA
OUR TOWN QUADRANGLE
SHEET NUMBER 12 OF 24

Joins sheet 8, Jacksons Gap

Joins sheet 7, Alexander City

86°00'00" 85°57'30" 85°55'00" 85°52'30"

32°52'30"



Joins sheet 11, Equality

Joins sheet 13, Dadeville

32°50'00"

32°47'30"

32°45'00"

86°00'00" 85°57'30" 85°55'00" 85°52'30"

Joins sheet 16, Red Hill

Joins sheet 17, Penders

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North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

OUR TOWN, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 12 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

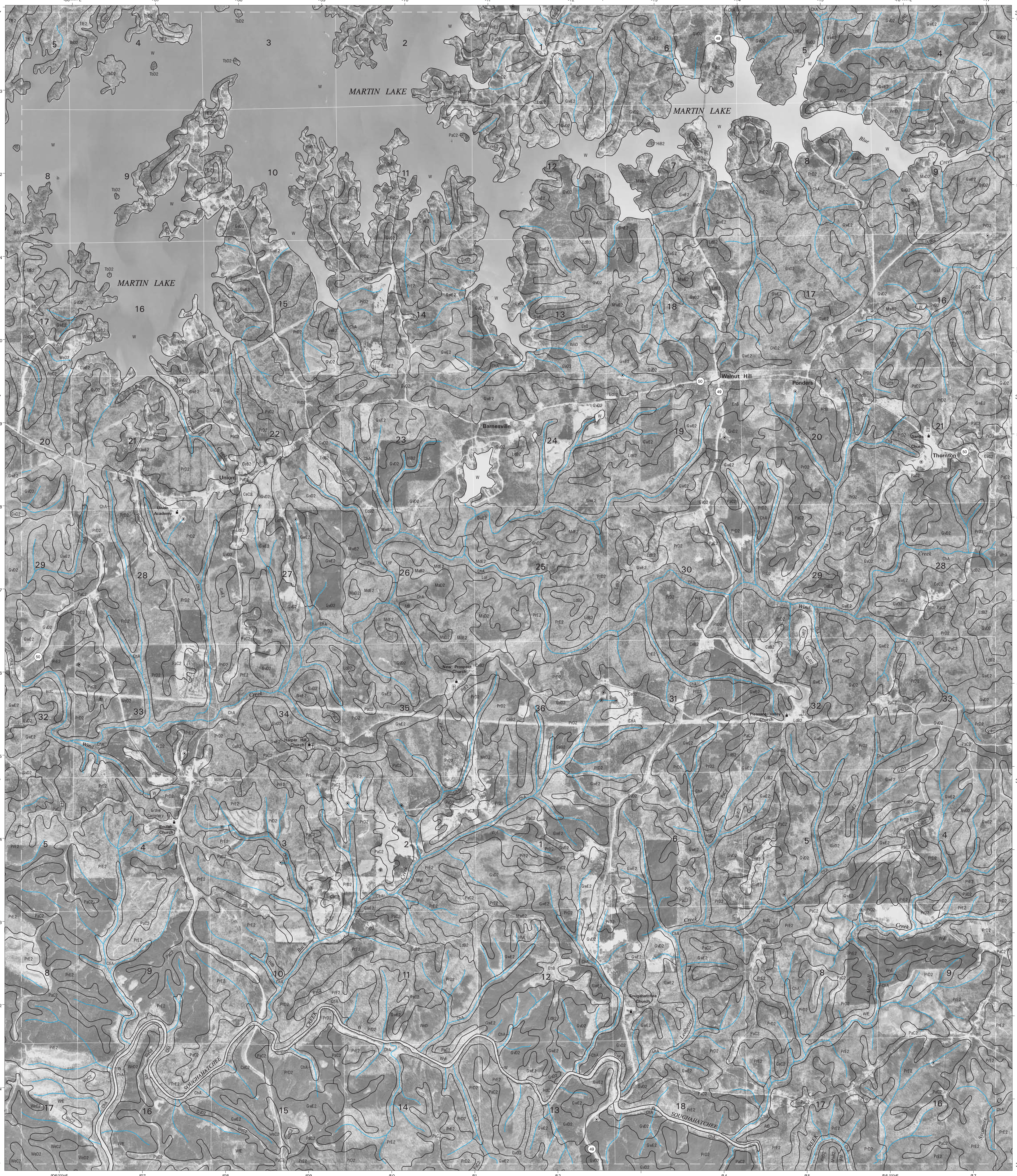
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
PONDERS QUADRANGLE
SHEET NUMBER 17 OF 24

Joins sheet 12, Our Town

Joins sheet 13, Dadeville

Joins sheet 14, Camp Hill



Joins sheet 20, Tallassee

Joins sheet 21, Carrville

Joins sheet 22, Notasulga

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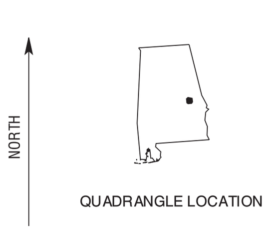
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

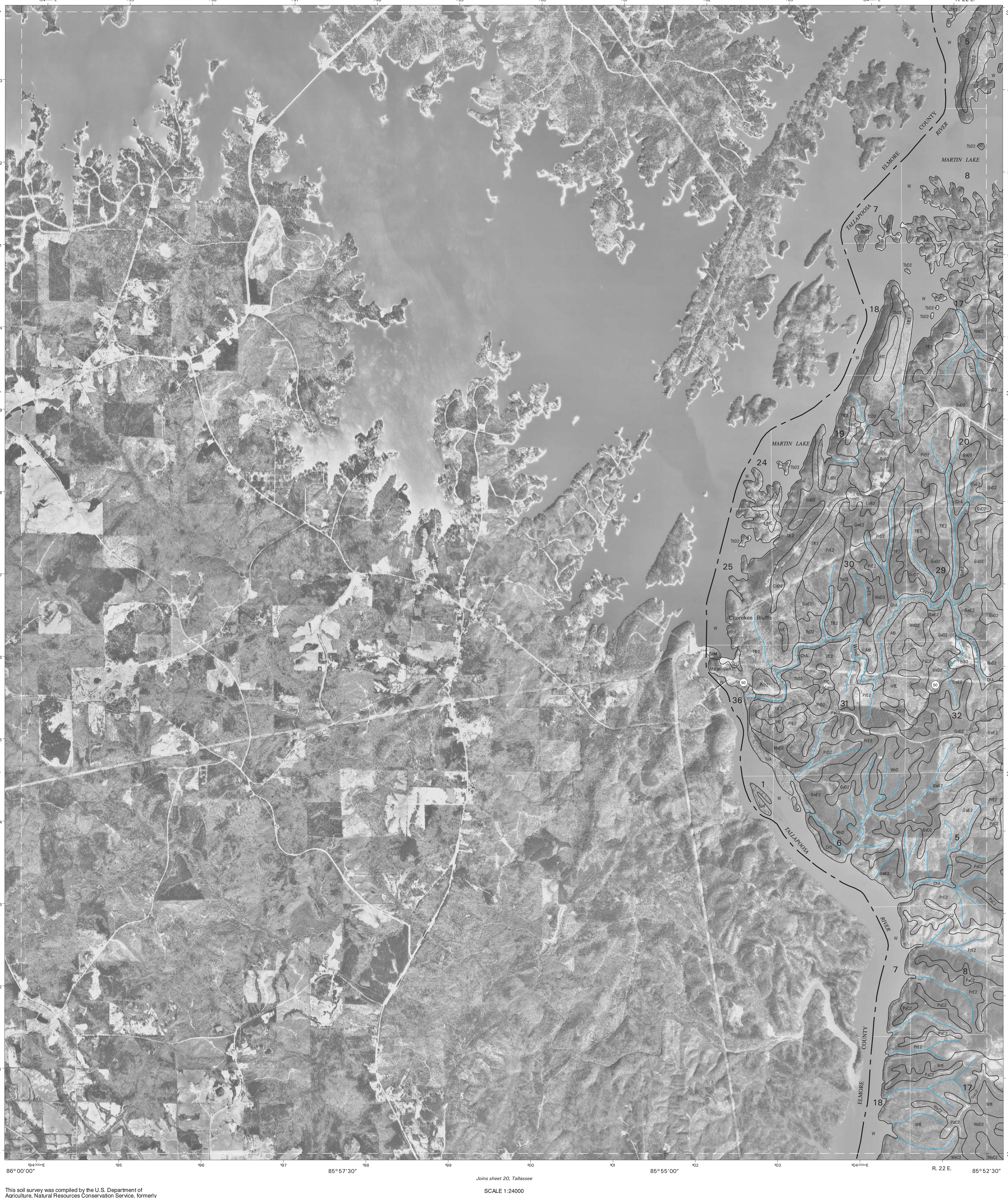
1 0 1
KILOMETERS

PONDERS, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 17 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
RED HILL QUADRANGLE
SHEET NUMBER 16 OF 24



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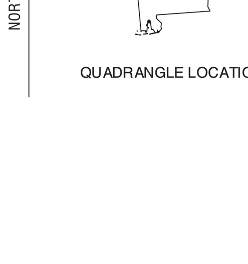
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



SCALE 1:24000

1 0 1 MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETERS

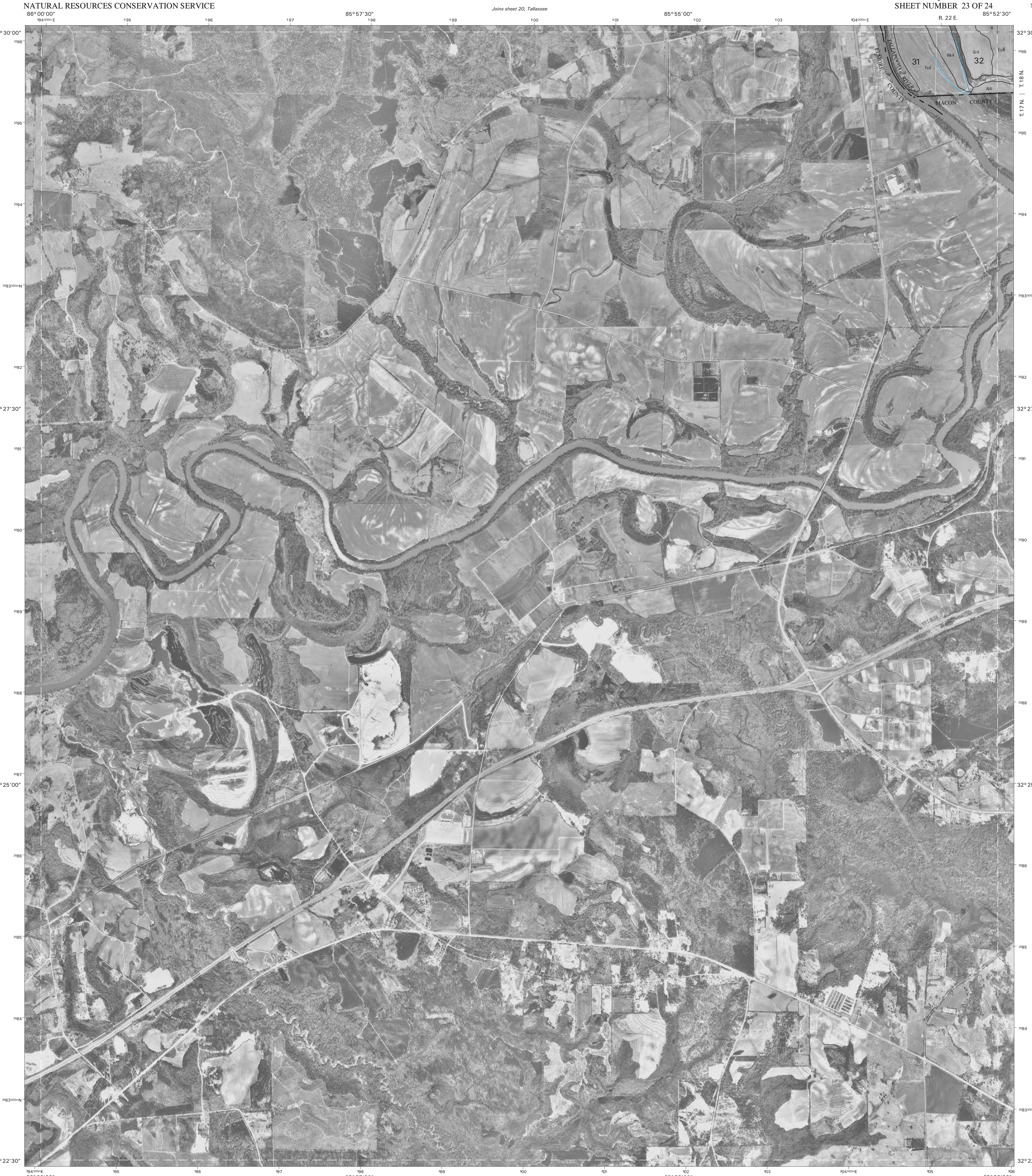
RED HILL, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 20, Tallassee

Joins sheet 21, Carrville



Joins sheet 24, La Place

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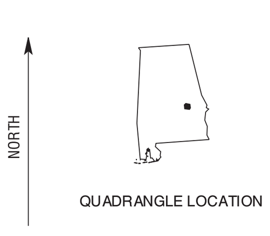
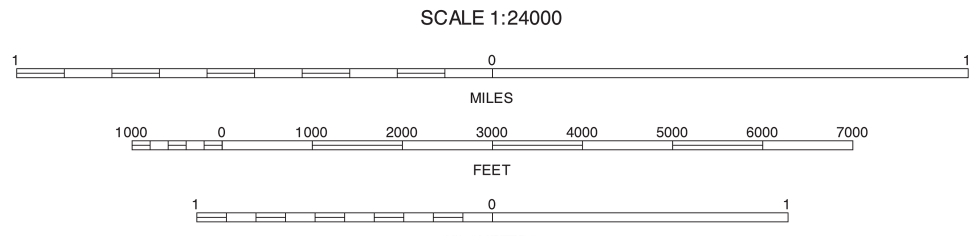
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



SCALE 1:24000



SHORTER, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 23 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

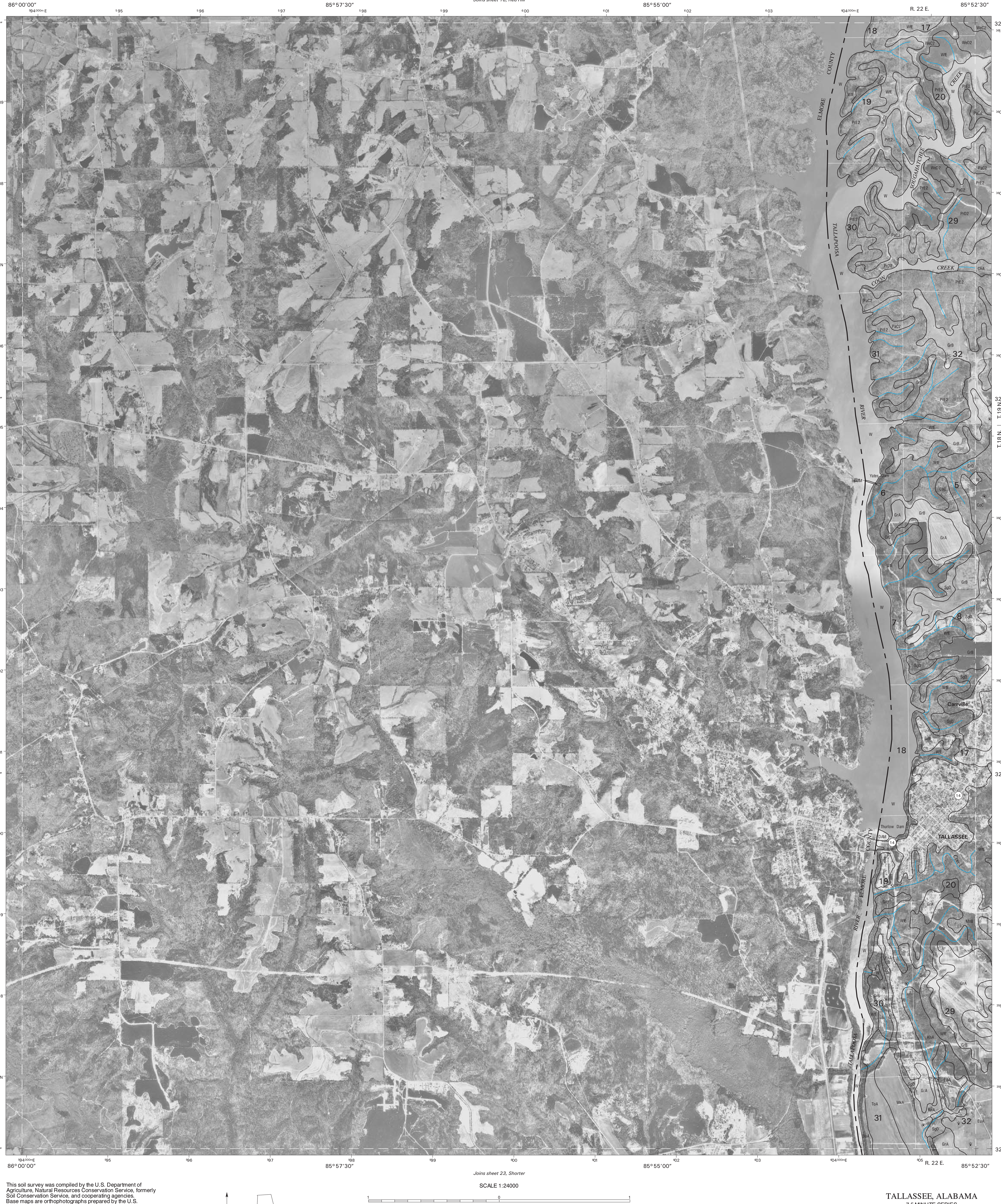
TALLAPOOSA COUNTY, ALABAMA
TALLASSEE QUADRANGLE
SHEET NUMBER 20 OF 24

Joins sheet 16, Red Hill

Joins sheet 17, Ponders

86° 00′00″ 85° 57′30″ 85° 55′00″ R. 22 E. 85° 52′30″

32° 37′30″



32° 35′00″

32° 32′30″

32° 30′00″

86° 00′00″ 85° 57′30″ 85° 55′00″ R. 22 E. 85° 52′30″

Joins sheet 21, Carrville

Joins sheet 23, Shorter

Joins sheet 24, La Place

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1997 aerial photography. Public Land Survey System (PLSS), hydrography and cultural information were compiled from U.S. Geological Survey topographic maps. The hydrography and PLSS layers were edited to conform with features represented on the publication imagery and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

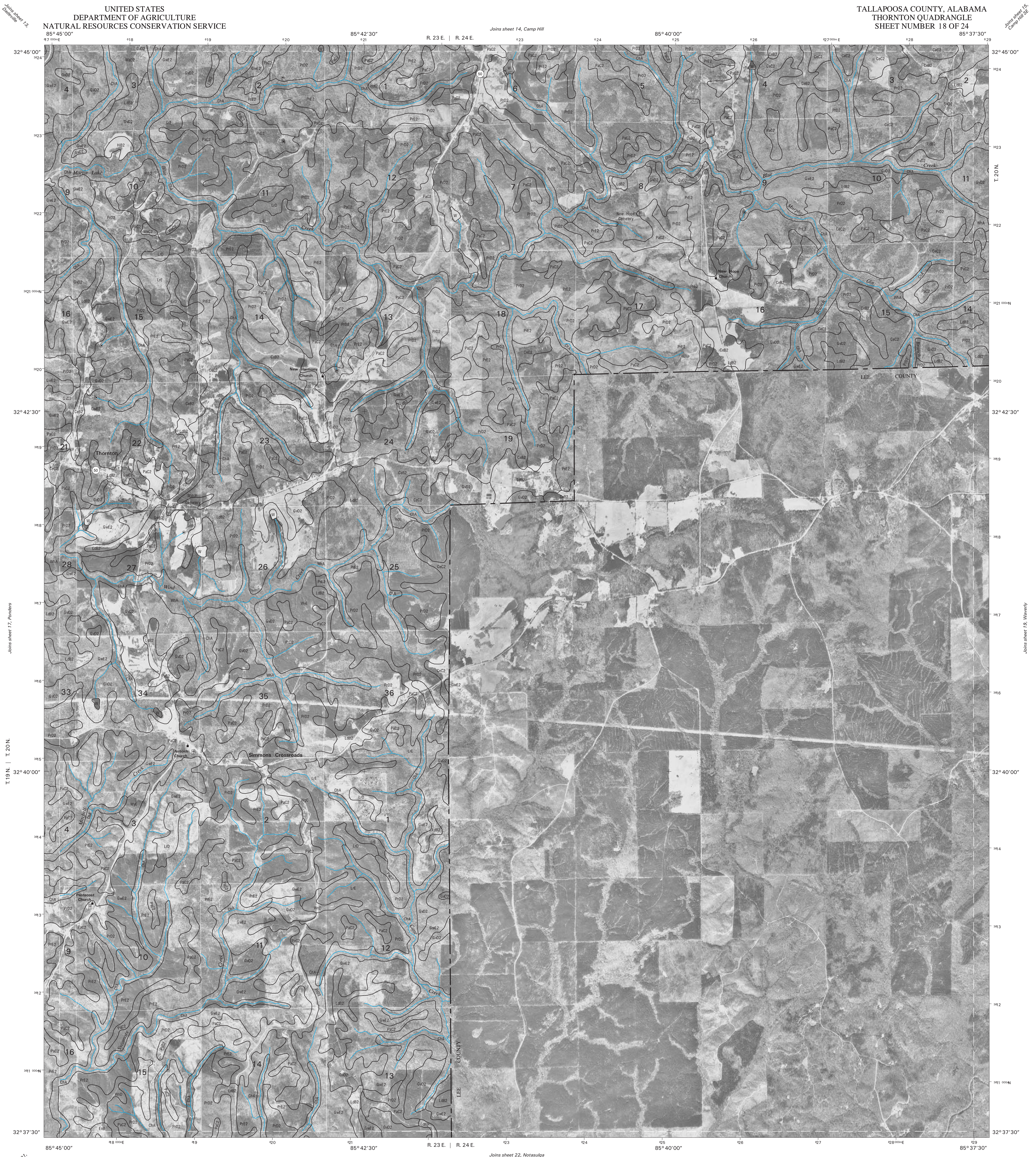
1 0 1
KILOMETERS

TALLASSEE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
THORNTON QUADRANGLE
SHEET NUMBER 18 OF 24



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North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

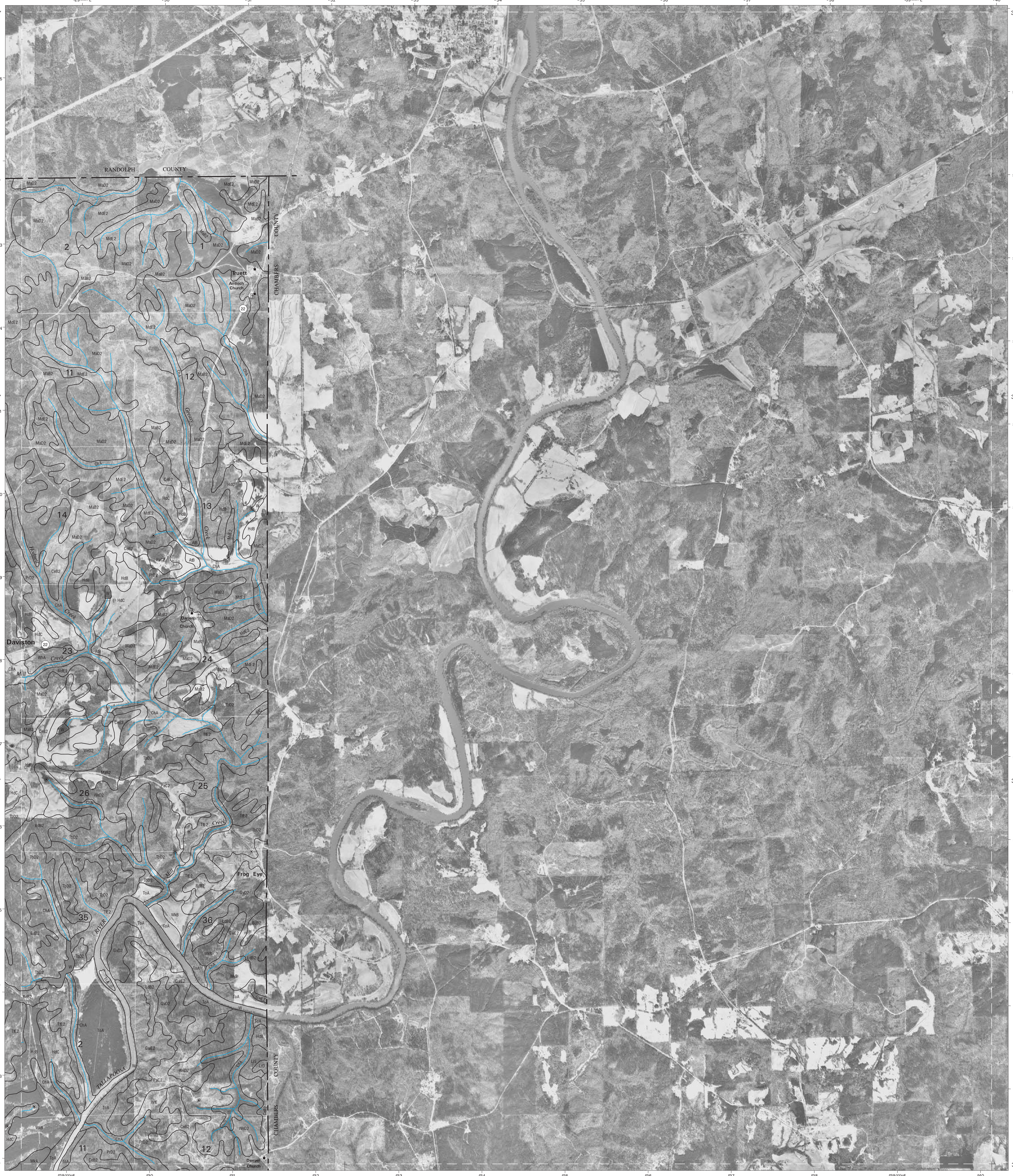
1 0 1
KILOMETERS

THORNTON, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
WADLEY SOUTH QUADRANGLE
SHEET NUMBER 5 OF 24



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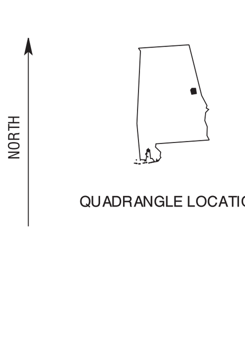
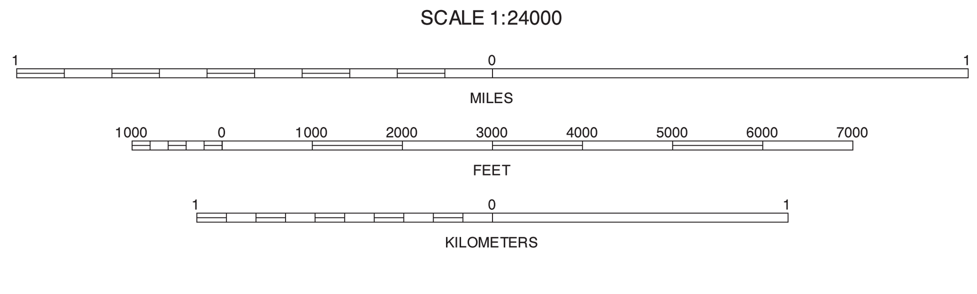
North American Datum of 1983 (NAD83). Spheroid is Geodetic Reference System of 1980 Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



WADLEY SOUTH, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 5 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 14, Camp Hill

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

TALLAPOOSA COUNTY, ALABAMA
WAVERLY QUADRANGLE
SHEET NUMBER 19 OF 24

Joins sheet 15, Camp Hill SE

85° 37′30″ | R. 24 E. | R. 25 E. | 85° 35′00″ | 85° 32′30″ | 85° 30′00″

32° 45′00″

32° 42′30″

32° 40′00″

32° 37′30″

85° 37′30″ | 85° 35′00″ | 85° 32′30″ | 85° 30′00″

Joins sheet 18, Thornton

Joins sheet 22, Notasulga

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

WAVERLY, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 24

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.